

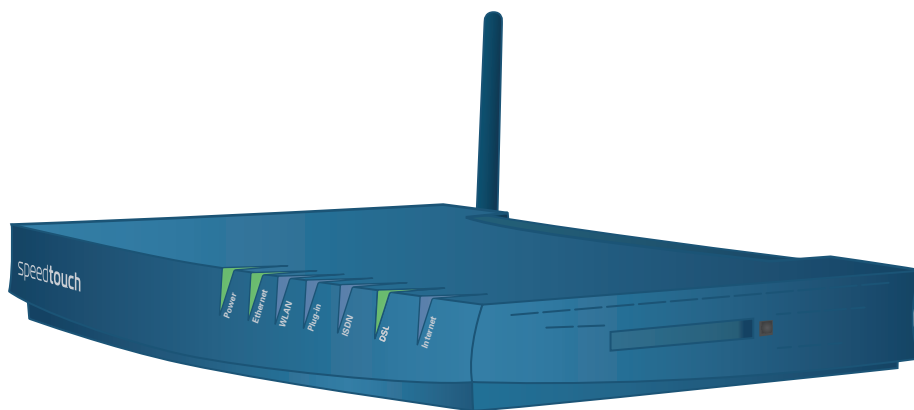
speedtouch™

# SpeedTouch™ 605/608/608 WL/620

(Wireless) Business DSL Routers



User's Guide



UPnP™

A THOMSON BRAND



# SpeedTouch™

## 605/608

## 608 WL/620

### User's Guide

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## Document Information

Status: (January 2006)

Reference:

Short Title: User's Guide ST605/608 (WL)/620 R5.4

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## About this User's Guide

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Used symbols The following symbols are used in this User's Guide:



A **note** provides additional information about a topic.



A **tip** provides an alternative method or shortcut to perform an action.



A **caution** warns you about potential problems or specific precautions that need to be taken.

---

Terminology

Generally, the SpeedTouch™605(i), SpeedTouch™608(i), SpeedTouch™608(i) WL and SpeedTouch™620(i) will be referred to as SpeedTouch™ in this User's Guide.

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Documentation and software updates

THOMSON continuously develops new solutions, but is also committed to improve its existing products.

For suggestions regarding this document, please contact [documentation.speedtouch@thomson.net](mailto:documentation.speedtouch@thomson.net).

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# 1 Getting to know your SpeedTouch™

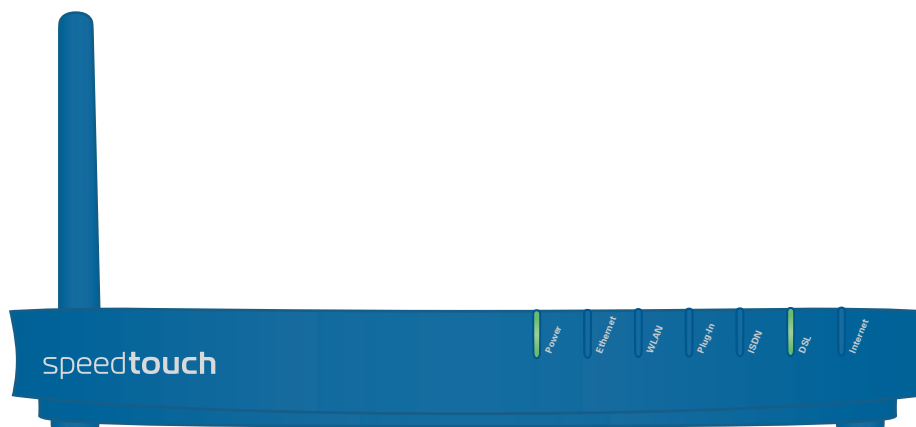
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Introduction	With the SpeedTouch™605(i) and SpeedTouch™608(i) Business DSL Routers and the SpeedTouch™608 WL(i) and SpeedTouch™620(i) Wireless Business DSL Routers you can build a secure small (home-)office network, seamlessly connecting wired and wireless devices and surf the Internet at high speed, all combined in one device.
Installation	For more information on how to set up, install and wire your SpeedTouch™ and set up Internet connection, refer to the Installation and Setup Guide.
Configuration	This User's Guide will help you configuring your SpeedTouch™.
Before you begin	Before connecting the SpeedTouch™, please read the SpeedTouch™ Quick Installation Guide and the Safety Instructions and Regulatory Notices.

## 1.1 SpeedTouch™ LED Behaviour

### Front panel LEDs

The SpeedTouch™ is equipped with a number of LEDs on its front panel, indicating the state of the device during normal operation.



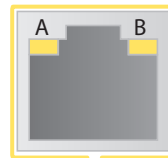
The following table shows the meaning of the different LEDs.

Indicator			Description
Name	Colour	State	
Power	Green	Solid on	Power on, normal operation
	Red	Solid on	Power on, self-test failed, indicating device malfunction
	Orange	Solid on	Bootloader active
	Off		Power off
Ethernet	Green	Blinking	Ethernet activity
		Solid on	Ethernet connection, no activity
	Off		No Ethernet connection
WLAN	Green	Blinking	Wireless activity, WPA encryption
		Solid on	No wireless activity, WPA encryption
	Amber	Blinking	Wireless activity, WEP encryption
		Solid on	No wireless activity, WEP encryption
	Red	Blinking	Wireless activity, no security
		Solid on	No wireless activity, no security
	Red/green	Toggling	Wireless client registration phase
	Off		WLAN disabled

Indicator			Description
Name	Colour	State	
Plug-in	Green	Blinking	Data passing through the cardbus
		Solid on	Cardbus is connected, no data passing through
	Off	Cardbus is not connected	
ISDN	Green	Blinking	ISDN activity
		Solid on	ISDN line connected, no activity
	Off	No ISDN line	
DSL	Green	Blinking	Pending DSL line synchronisation
		Solid on	DSL line synchronised
	Off	No DSL line	
Internet	Green	Blinking	Internet activity
		Solid on	Internet connectivity, no activity
	Red	Solid on	Internet connection setup failed
	Off	No Internet connection	

**Ethernet LEDs**

A LED may be provided per Ethernet port to indicate link integrity (or activity). Depending on the SpeedTouch™ product you are using, a second LED (A) may be provided to indicate the 10/100Base-T selection:



Indicator			Description
Name		LED Status	
A (Optional)	Integrity (Activity)	Off	No connection on this port
		Solid on	Ethernet link up
		Blinking	Data is flowing from/to this port
B	10/100Base-T	Off	10Base-T Ethernet connection
		Solid on	100Base-T Ethernet connection

## 1.2 Accessing your SpeedTouch™

Access methods Your SpeedTouch™ is accessible in one of the following ways:

Access Method	Can be used to
Web browser	Configure your SpeedTouch™ via HTTP or HTTPS. For more information, see "1.2.1 Access via the Web Interface" on page 7.
Command Line Interface (CLI)	Fine-tune your SpeedTouch™ configuration. For more information, see "1.2.2 Access via CLI" on page 8.
File Transfer Protocol (FTP)	Back up and restore data on your SpeedTouch™. For more information, see "1.2.3 Access via FTP" on page 10.
Remote Assistance	Allow a remote user to help you configuring your SpeedTouch™. For more information, see "1.2.4 Remote Assistance" on page 13.



## 1.2.1 Access via the Web Interface

To access the SpeedTouch™ via the Web interface

Proceed as follows:

- 1** Open a Web browser.
- 2** In the address bar, type your SpeedTouch™'s IP address or DNS host name (<http://speedtouch.lan> or [192.168.1.254](http://192.168.1.254) by default)



You can access the pages via HTTP or HTTPS.

For remote assistance the secure version HTTPS is used in combination with certificates. Simply provide your ISP with the link as shown, user name and password before he can log on to the pages.

For more information, see "1.2.4 Remote Assistance" on page 13.

The SpeedTouch™ Home page appears, from where you can navigate to all the configurable aspects of the SpeedTouch™.

For more information on the Web pages, see "4 Basic Configuration" on page 35.

## 1.2.2 Access via CLI

---

To access the SpeedTouch™ via the Command Line Interface (CLI)

You can access the Command Line Interface (CLI) via:

- ▶ The embedded Expert pages. For more information, see “5 Expert Configuration” on page 99.
- ▶ A Telnet session  
This requires a TCP/IP connection between the host from which the Telnet session is opened and the SpeedTouch™. Your SpeedTouch™ and the connected computer must have an IP address in the same subnet.
- ▶ The serial ‘Console’ interface
- ▶ Quote site commands (over FTP)  
For more information, see “Quote site command” on page 12.

For more information on CLI commands, see the SpeedTouch™ CLI Reference Guide.



## 1.2.3 Access via FTP

To access the SpeedTouch™ via the File Transfer Protocol (FTP)

You can access the file system of the SpeedTouch™ via the File Transfer Protocol (FTP), in order to:

- ▶ Restore or back up configuration files, templates or language packs.
- ▶ Upgrade your configuration or firmware.

File system

The SpeedTouch™ file system is stored on non-volatile memory and contains the SpeedTouch™ software, service template files and (optionally) default setting files.

To open an FTP session

Proceed as follows:

- 1** Open a **Command Prompt** window.



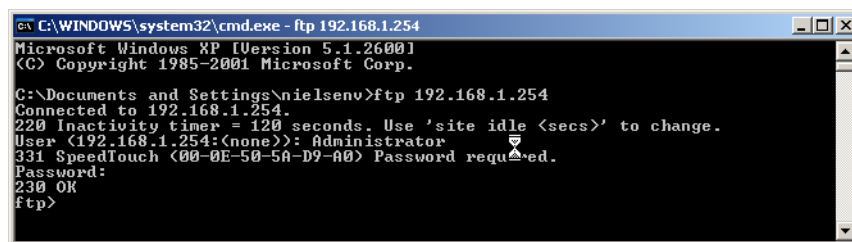
In Microsoft Windows XP for instance:

- 1** On the Windows taskbar, click **Start**.
  - 2** Select **(All) Programs > Accessories > Command Prompt**.
- 2** At the prompt, type **ftp** followed by the IP address of your SpeedTouch™ (192.168.1.254 by default).
  - 3** Enter your SpeedTouch™ security user name and password.



The default user is 'Administrator' and the default password is blank.

The example below shows an FTP session to the SpeedTouch™ file system.



```

C:\WINDOWS\system32\cmd.exe - ftp 192.168.1.254
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\nielsenv>ftp 192.168.1.254
Connected to 192.168.1.254.
220 Inactivity timer = 120 seconds. Use 'site idle <secs>' to change.
User (192.168.1.254:(none)): Administrator
331 SpeedTouch (00-0E-50-5A-D9-A0) Password required.
Password:
230 OK
ftp>
  
```

File system structure

The structure of the file system is very simple: it consists of a single root directory called **root** and two subdirectories called **active** and **dl** (download).

- ▶ The **root** directory contains:
  - ▶ all the necessary files for the SpeedTouch™ to start correctly
  - ▶ the active and the dl directories
- ▶ The **active** directory contains the active software image.
- ▶ The **dl** directory contains the passive software image.



If you made changes to the SpeedTouch™ configuration and saved them, a user.ini configuration settings file is created in the **dl** subdirectory.

File system access rights

In the different directories you have the following rights:

Directory	Access rights
<b>root</b>	NO read/write
<b>active</b>	read-only
<b>dl</b>	read/write

Common FTP commands

Depending on the access rights you have in a directory, you can use one of the following commands:

Use the command ...	to ...
cd	access another directory than the one currently open. Example: ftp>cd dl.
dir	list the directory files. Example: ftp>dir.
bin	set the transfer mode to 'binary'.
hash	turn on the hashing option.
put	upload files. Example: ftp>put C:/MyBackupFiles/user.ini. A configuration file must be uploaded to the dl directory.
get	download files. Example: ftp>get user.ini. Downloading the configuration file must be done from the dl directory.
delete	delete files.
bye	quit FTP.

## FTP file transfer

To allow correct file transfers, set the transfer mode to “binary”: at the ftp prompt, type **bin** and press ENTER.



Turn on the hashing option to see the progression of the file transfer: At the ftp prompt, type **hash** and press ENTER.

Example.

```
/home/doejohn{1}$ftp 192.168.1.254
Connected to 192.168.1.254
220 Inactivity timer = 120 seconds. Use 'site idle <secs>' to change.
Name (192.168.1.254:doejohn):
331 SpeedTouch™ (00-90-D0-01-02-03) User 'doejohn' OK. Password required.
Password : #####
330 OK
ftp>
ftp>bin
200 TYPE is now 8-bit binary
ftp>
ftp>hash
200Hash mark printing on (8192 bytes/hash mark).
ftp>cd dl
250 Changed to /dl
ftp>put C:\user.ini
200 Connected to 192.168.1.10 port 1271
150 Opening data connection for user.ini

226 File written successfully
ftp: 256 bytes sent in 0,000Seconds 256000,000Kbytes/sec.
ftp>
```

## Quote site command

All the CLI commands can be executed from within an FTP session. Only complete CLI commands (in other words, the complete command syntax with all the parameters already specified) can be executed.

Example: To execute the CLI command **:ip iplist** to list all IP addresses currently assigned to SpeedTouch™ interfaces, at the FTP prompt, type 'quote site ip iplist' and press ENTER.

```
ftp> quote site ip iplist
200- Interface      Type      IP-address      Point-to-point/Mask
200- 2      LocalNetwork  Ethernet  10.0.0.138      255.255.255.0
200- 2      LocalNetwork  Ethernet  *192.168.1.254  255.255.255.0
200- 1      Internet      Serial    81.240.198.191  81.240.198.1
200- 0      loop         Internal  127.0.0.1       255.255.255.255
200-
200 CLI command "ip iplist" executed
ftp>
```

For more information on CLI commands, see the SpeedTouch™ CLI Reference Guide.

## 1.2.4 Remote Assistance

To access the SpeedTouch™ remotely

You can make your SpeedTouch accessible from the Internet with regard to remote support. In this way, you can allow your help desk to access your SpeedTouch™ remotely.

To enable remote access

Proceed as follows:

- 1** Go to the SpeedTouch™ pages, as described in “1.2.1 Access via the Web Interface” on page 7.
- 2** In the menu, select **Toolbox > Remote Assistance**.
- 3** Click **Enable Remote Assistance**.
- 4** Provide the following parameters to your help desk:
  - ▶ URL (the HTTPS link)
  - ▶ User name
  - ▶ Password

Your ISP is now able to access your SpeedTouch™ via the HTTPS link in combination with the provided certificate (a secure authentication mechanism).



For security reasons, remote assistance will be automatically disabled after 20 minutes of inactivity, or after restarting your SpeedTouch™.

To disable remote access

Proceed as follows:

- 1** Go to the SpeedTouch™ pages, as described in “1.2.1 Access via the Web Interface” on page 7.
- 2** In the menu, select **Toolbox > Remote Assistance**.
- 3** Click **Disable Remote Assistance**.





## 2 Local Network Setup

---

Introduction The SpeedTouch™ offers you the following local networking solutions:

- ▶ Wired Ethernet
- ▶ Wireless Ethernet

---

Device settings Once you have connected a device, you can personalise its settings. For more information, see “[Configure](#)” on page 85.

## 2.1 Wired Ethernet

---

**Local network** The Ethernet ports on the back panel allow you to connect the SpeedTouch™ to an existing 10 or 100Base-T Ethernet network or one (or more) computer(s) with an installed Ethernet card.

Using the SpeedTouch™ Ethernet switch, you can create a local Ethernet network of up to four devices, without needing extra networking devices.



In the SpeedTouch™ package, a yellow full-wired straight-through RJ-45/RJ-45 Ethernet cable is included.

---

### Standard wiring procedure

Use the yellow Ethernet cable provided to wire your computer's Ethernet port to one of the SpeedTouch™'s Ethernet ports.



The Ethernet cable can also be used to wire an Ethernet port of your SpeedTouch™ to any external Ethernet hub or switch.

Please follow the installation instructions supplied with the external hub or switch for connections and Ethernet cabling.

---

### Ethernet link check

LED indicators allow you to check your Ethernet. See "1.1 SpeedTouch™ LED Behaviour" on page 4 for more information.

---

### Device settings

Once you have connected a device, you can personalise its settings. For more information, see "Device settings" on page 15.

---

### Managed Ethernet switch

Your SpeedTouch™ intelligently switches data between the devices on your LAN, using priority queuing to ensure that higher priority messages are delivered first and in real time. This feature maximizes your network performance.

The managed Ethernet switch allows you to configure a Virtual Local Area Network (VLAN), group ports or isolate a port, configure secure channel connections, define Quality of Service (QoS), and configure port mirroring, allowing monitoring from one port to another.

You can configure the managed Ethernet switch manually using CLI (For more information, see the SpeedTouch™ CLI Reference Guide) or on the expert Web pages (see "5.5.3 Managed Switch" on page 161).

## 2.2 Wireless Ethernet

### Introduction

The SpeedTouch™ 608 WL/620Wi-Fi® certified IEEE 802.11g compliant wireless access point allows multiple computers to connect wirelessly to your local network over the SpeedTouch™ Wireless LAN environment. The SpeedTouch™ is backward compatible with IEEE 802.11b, which means 802.11b and 802.11g devices can coexist in the same wireless network.

The Wireless Distribution System (WDS) on your SpeedTouch™ allows you to extend the range of your wireless network. To be able to use WDS, you will need to introduce an additional WDS-enabled access point into your wireless network.

To be able to connect the computers, make sure that a wireless client adapter (WLAN client) is installed on each computer you want to connect via the WLAN.

### Wireless client requirements

All wireless client adapters compliant to 802.11g and/or 802.11b can communicate with the SpeedTouch™ and other members of the SpeedTouch™ (W)LAN environment. However, be aware that only 802.11g compliant wireless clients are able to gain full profit of the 54 Mb/s (Max) bandwidth delivered by the SpeedTouch™.

It is highly recommended to use only wireless client adapters that are Wi-Fi™ certified to ensure smooth interoperability with the SpeedTouch™'s WLAN.

## 2.2.1 Wireless Basics

- 
- 802.11b/g
- ▶ 802.11b is an IEEE standard, operating at 2,4 GHz at a speed of up to 11 Mb/s.
  - ▶ 802.11g, a newer IEEE standard also operating at 2,4 GHz, gives you up to 54 Mb/s speed, more security and better performance.

---

Wireless Fidelity

The Wi-Fi certification ensures that your SpeedTouch™ will interoperate with any Wi-Fi certified 802.11g and 802.11b compliant wireless device.

---

Access Point

The SpeedTouch™ Wireless LAN Access Point (AP) behaves as a networking hub allowing to wirelessly interconnect several devices to the local (W)LAN and to provide access to the Internet.

---

Network Name or SSID

The WLAN's 'radio' link is a shared medium. As no physical connection exists between the SpeedTouch™ and wireless clients, a name must be given to allow unique identification of your WLAN radio link. This is done by the Service Set ID (SSID), also referred to as Network Name. Wireless clients must be part of this SSID environment in order to be able to communicate with other clients on the (W)LAN - including the SpeedTouch™.

---

Radio channels

The 802.11g standard allows several WLAN networks using different radio channels to be co-located. The SpeedTouch™ supports multiple radio channels and is able to select the best radio channel at each startup.

You can choose to set the channels automatically or manually.



The different channels overlap. To avoid interference with another access point, make sure that the separation (in terms of frequency) is as high as possible. It is recommended to keep at least 3 channels between 2 different access points.

The SpeedTouch™ supports all channels allowed for wireless networking. However, depending on local regulations, the number of channels actually allowed to be used may be additionally restricted, as shown in the table below.

Regulatory Domain	Allowed Radio Channels
China	1 to 13
Europe	1 to 13
Israel	5 to 8
Japan	1 to 14
Jordan	10 to 13
Thailand	1 to 14
USA / Canada	1 to 11

---

**Antennas** Direct the external antenna to allow optimization of the wireless link. If for example the antenna is erect, wireless links in the horizontal plane are favoured. Please note that the antenna characteristics are influenced by the environment, that is by reflections of the radio signal against walls or ceilings. It is advisable to use the received signal strength as indicated by the wireless client manager to optimize the antenna position for the link to a given client.

Concrete walls weaken the radio signal and thus affect the connection.

## 2.2.2 Connecting Wireless Clients for the First Time

### Wireless default settings

After every Reset-to-Defaults, the SpeedTouch™ wireless access point configuration is returned to its initial default settings.

These default settings are:

- ▶ Security level is low (security disabled) for an easy first use, meaning the data will not be encrypted. Wireless security settings are described in “2.2.3 Wireless Security” on page 22.
- ▶ This default network name (SSID) is printed on the identification label located on the bottom of your SpeedTouch™ and is unique for each device. It consists of the concatenation of the word “SpeedTouch” and 6 hexadecimal characters, without any spaces, for example SpeedTouch123456.
- ▶ The SpeedTouch™ is broadcasting its network name (SSID).
- ▶ The radio channel number is set to ‘automatically scan for the best radio channel’.
- ▶ Registration is not activated. New stations are allowed automatically. The Access Control List is open and empty. No wireless client will be denied access to the SpeedTouch™ based on its physical hardware address.



The default wireless settings may differ from the settings listed above depending on your Service Provider’s requirements. If this is the case, refer to the installation/configuration instructions provided by your Service Provider.

### To prepare wireless clients for the first time

Make sure that:

- ▶ The SpeedTouch™ is turned on and ready for service.
- ▶ The SpeedTouch™ is in its default configuration.  
If necessary, reset the SpeedTouch™ to its default configuration (See “7.3 Reset to Factory Defaults” on page 194 for more information).
- ▶ A wireless client adapter is installed on your computer.
- ▶ The wireless client adapter’s IP configuration is set to dynamically obtain its IP configuration (DHCP) - this is usually the default. For more information, see the documentation of your wireless client adapter.

### To configure wireless clients for the first time

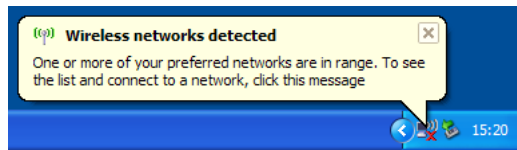
The wireless client must be correctly configured for the default network name. As the SpeedTouch™ broadcasts its network name to the wireless clients, you can select the SpeedTouch™ wireless network from a list of available networks. Depending on your wireless client a wireless icon may become green or a message similar to the following may appear: “Successfully joined Wireless network SpeedTouch123456”.




Some wireless clients do not automatically join a wireless network. If so, follow the instructions for the wireless client software to initiate association.

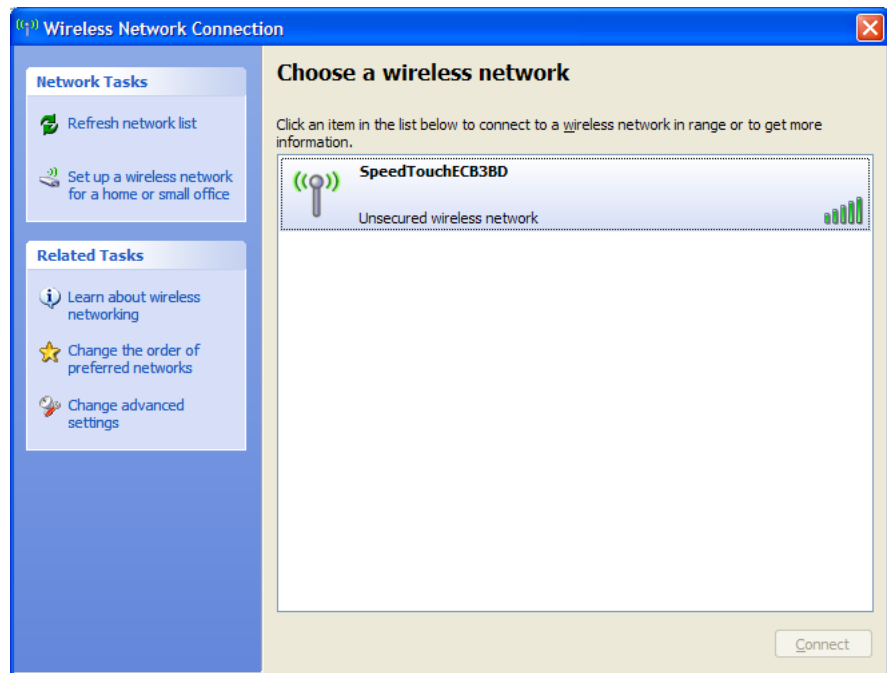
First-time association example

The example below shows how the SpeedTouch™ wireless network is presented towards a Windows XP Service Pack 2 system.



Proceed as follows to associate your wireless client to the SpeedTouch™:

- 1 Click the network icon in the notification area:  The **Wireless Network Connection** window appears:



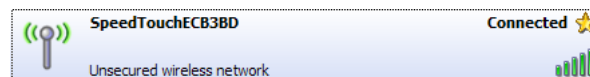
- 2 In the **Choose a wireless network** list, select the SpeedTouch™ wireless network and click **Connect**.

The following window appears:



- 3 Click **Connect Anyway**.

Your computer is now connected to the SpeedTouch™ wireless network.



For other Operating Systems the wireless client will in most cases be configured via dedicated client managers.

## 2.2.3 Wireless Security

### Introduction

Since the SpeedTouch™ wireless environment is a radio environment, precautions must be taken to ensure that your wireless network is safe from malicious intruders. To secure your wireless network, the following wireless access point settings can be personalised:

- ▶ Your Network Name (SSID)
- ▶ ACL setting
- ▶ Data encryption

### Security settings

To personalise the wireless security settings on your SpeedTouch™:

- 1 Go to the SpeedTouch™ Web pages.
- 2 In the menu, select **Home Network**.
- 3 Click your WLAN.
- 4 In the upper right corner, click **Configure**.
- 5 On the **Wireless Access Point** page, you can modify the **Security** settings.

#### • Security

Broadcast Network Name:

Allow New Devices:

Encryption:

Disabled

Use WEP Encryption

Use WPA-PSK Encryption

WPA-PSK Encryption Key:

WPA-PSK Version:

### Network Name (SSID)

On the **Wireless Access Point** page, you can give a new name to your **Network Name (SSID)**.

Under **Security**, you can clear **Broadcast Network Name (SSID)**, to prohibit the Network Name from being broadcast.



### Access Control List (ACL)

The SpeedTouch™ features a managed Access Control List (ACL) and a physical registration mechanism in the form of the Association / Registration button on the back panel of your SpeedTouch™.

On the **Wireless Access Point** page, you have the following options for the ACL:

**New stations are**

- ▶ **Allowed (automatically):** All new stations can access the SpeedTouch™.
- ▶ **Allowed (via registration):** Only allowed stations in the ACL have access. You can add new stations via:
  - ▶ The Association / Registration button.
  - ▶ The **Search for wireless devices** task.

For more information, see “ [Registering wireless clients](#)” on page 24.

- ▶ **Not allowed:** Only allowed stations in the ACL have access. You can add new stations to the ACL only via the **Search for wireless devices** task. For more information, see “ [Registering clients via Web pages](#)” on page 24.

### Data encryption

To set up wireless connectivity, you can choose different levels of security:

- ▶ **Security disabled (default)**  
No security; the data will not be encrypted, no authentication process will be used.
- ▶ **WEP (Wired-Equivalent Privacy)**  
Traffic between the SpeedTouch™ and the clients is encrypted by sharing a pre-defined 64-bit or a 128-bit Network key for secure communication with legacy 802.11b clients.



The default 64 bit hexadecimal WEP key is printed on the identification label located at the bottom of the SpeedTouch™ and is unique for each device.

- ▶ **WPA-PSK (Wi-Fi Protected Access Pre-Shared Key)**  
The highest form of security available for home users. Make sure that your wireless client and client manager are compatible with it.



The default WPA-Personal pass phrase is printed on the identification label located at the bottom of the SpeedTouch™ and is unique for each device.

The WPA-Personal pass phrase must consist of 8 to 63 ASCII characters or 8 to 64 HEX digits.

- ▶ **Wi-Fi Protected Access (WPA Encryption)**

WPA is the highest form of security available but make sure that your wireless client and client manager are compatible with it. If you want to use this level of encryption you must have a RADIUS (Remote Authentication Dial-in User Service) server installed on your network.



Wireless access points may already have been configured during the Home Install Wizard.



If you change wireless settings, wireless clients will be disconnected. In this case, you need to reconfigure the wireless clients before you can connect to the Internet again.

## 2.2.4 Connecting Additional Wireless Clients

### Preconditions

Make sure that:

- ▶ The SpeedTouch™ is turned on and ready for service.
- ▶ The SpeedTouch™ has been configured as DHCP server (default).
- ▶ The wireless client adapters have been installed on all the computers you want to connect to the WLAN.

### Security issues

- ▶ Depending on the personalised wireless settings:
  - ▶ Make sure you use the same encryption or security level on the client as on your SpeedTouch™. If for instance WPA-PSK is enabled on the SpeedTouch™, you must also configure the wireless client to use WPA-PSK and configure the same WPA-PSK pass phrase.
  - ▶ If the Network Name (SSID) is not broadcast, you must configure the wireless client for the SpeedTouch™ Network Name. Refer to the documentation of your wireless client for more information.
- ▶ If the SpeedTouch™ ACL settings are set to:
  - ▶ **New stations are allowed (automatically)**, your device can access the SpeedTouch™ WLAN without additional configuration.
  - ▶ **New stations are allowed (via registration)**, you have to register your wireless client(s). For more information, see “ Registering wireless clients” on page 24.
  - ▶ **New stations are not allowed**, you have to search for wireless client(s) using the SpeedTouch™ web pages, see “ Registering clients via Web pages” on page 24.

### Registering wireless clients

If ‘New stations are allowed (via registration)’, you can add a wireless client to the ACL via:

- ▶ Registering clients via Web pages
- ▶ Registering clients via the association button

### Registering clients via Web pages

Proceed as follows to add a wireless client to the ACL:

- 1** Go to the SpeedTouch™ Web pages.
- 2** In the menu, select **Home Network > Devices**.
- 3** In the **Pick a task** list, click **Search for wireless devices**.  
The SpeedTouch™ searches for new wireless stations that use the encryption key of the SpeedTouch™ Access Point.  
The SpeedTouch™ takes you to the Home Network. The new station will be shown next to the name of the SpeedTouch™ WLAN.
- 4** Click the name of the new station.
- 5** Click **Configure**.
- 6** Select **Allowed on WLAN**, and then click **Apply**.  
The device is added to the ACL and will always be allowed to connect to the SpeedTouch™.

## Registering clients via the association button

Proceed as follows to register new wireless network clients via the association button:

- 1** Push the Association button on the SpeedTouch™ back panel for at least two seconds.

The WLAN LED toggles between green and red.

The ACL will be unlocked for a time frame of one minute. Any new wireless client successfully attempting to connect to the SpeedTouch™ (having the correct wireless settings, that is the network name and, if required, the network key) within the time frame of one minute, will be added to the table. The SpeedTouch™ automatically saves your current configuration at the end of the registration phase.



Some WLAN clients do not automatically join a WLAN. If so, follow the instructions for the WLAN client software to initiate the association.

- 2** Successfully registered stations are associated to the SpeedTouch™ WLAN. Depending on your WLAN client adapter, a wireless icon may become green or a message similar to the following may appear: "Successfully joined Wireless network SpeedTouch123456".
- 3** The wireless clients will be added to the SpeedTouch™ ACL.
- 4** After one minute the ACL is locked.



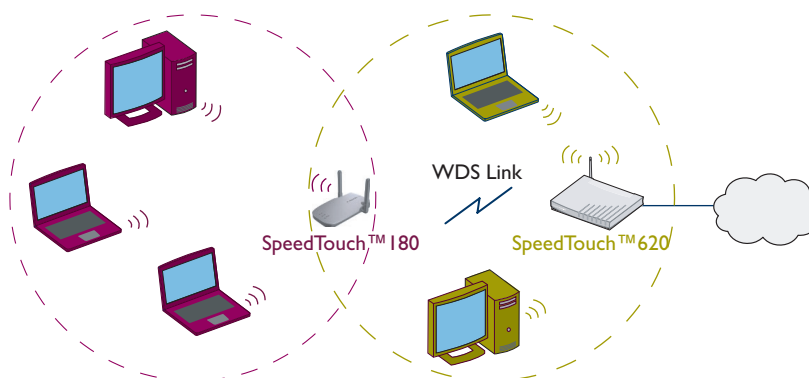
The registration procedure can be repeated as often as needed.

## 2.2.5 Extending the Range of Your Wireless Network

### Wireless Distribution System (WDS)

The SpeedTouch™ features the Wireless Distribution System (WDS) functionality. This feature allows you to extend the range of your wireless network by introducing one or more WDS-enabled devices into your wireless network.

WDS enables data packets to pass from one wireless access point to another, as if the access points were ports on a wired Ethernet switch. WDS allows you to extend the range of your SpeedTouch™ by means of one or more wireless repeaters, like for instance a SpeedTouch™180. The following illustration depicts two WDS-enabled devices communicating via WDS.




The SpeedTouch™ allows you to add up to four wireless repeaters.



Repeaters extend the coverage area of your wireless LAN. However, bear in mind that throughput is reduced for wireless clients that are connected through a repeater.

### Preconditions

Make sure that:

- ▶ Your wireless repeater is be WDS enabled.
- ▶ Both your SpeedTouch™ and your wireless repeater use:
  - ▶ The same WEP key if WEP is enabled.
  - ▶  WPA encryption is not supported when using WDS.
  - ▶ The same **fixed** channel.



The SpeedTouch™ and your wireless repeater do not necessarily need to use the same SSID. Using different SSIDs allows you to force your wireless clients to use either the access point of the SpeedTouch™ or the one of your wireless repeater.

To configure WDS

Proceed as follows:

- 1 Go to the SpeedTouch™ Web pages.
- 2 In the menu, select **Home Network**.
- 3 Click your WLAN.
- 4 In the upper right corner, click **Configure**.



If not already done, set a **fixed** channel and check whether the security settings (WEP encryption or no encryption) on your SpeedTouch™ are the same as on the repeater.

- 5 On the **Wireless Access Point** page, in the **Pick a task** list, click **Configure WDS**.



### SpeedTouch123456

- **Configuration**

WDS Enabled:

- **Accessible Access Points**

WDS	SSID	BSSID	Channel	Noise
<i>There are no networks detected.</i>				

Apply Cancel

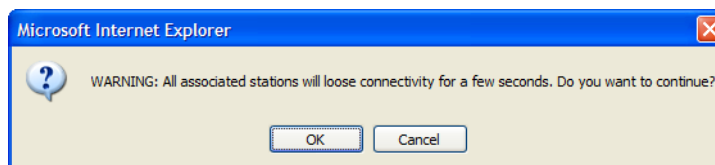
Pick a task...



[Scan for wireless accesspoints](#)

- 6 Select **WDS Enabled**.
- 7 In the **Pick a task** list, click **Scan for wireless access points**.

A warning is displayed.



- 8 Click **OK**.
- The SpeedTouch™ scans for access points on the same radio channel.
- 9 Select your repeater in the **List of Accessible Access Points**, and then click **Apply**.



### SpeedTouch123456

- **Configuration**

WDS Enabled:

- **Accessible Access Points**

WDS	SSID	BSSID	Channel	Noise
<input type="checkbox"/>	YourNetwork	00:30:F1:DB:B8:3D	3	-89

Apply Cancel



## 3 Internet Connectivity Dial-In Clients

**Introduction** If you want to set up initial Internet connectivity using the Home Install Wizard on the Setup CD or the embedded Easy Setup, refer to the provided Installation and Setup Guide.

### Access methods

Depending on the configuration of the SpeedTouch™ you may have:

▶ **Direct access:**

As soon as the initial configuration is finished, immediate and uninterrupted WAN access is provided.



If you have direct access, the remote organisation might ask for a user name and password on an Internet welcome page.

▶ **Dial-in access:**

Access must be explicitly established, that is by “dialling” into a Broadband Remote Access Server (BRAS).

Depending on the SpeedTouch™ configuration, dial-in access is provided via the SpeedTouch™’s Routed PPPoA or Routed PPPoE packet services with embedded PPP client.

### Connection protocols

The applied connection protocol model depends on the service profile you selected to configure the SpeedTouch™ and should correspond with the Service Provider’s requirements. If, for instance, your ISP provides PPPoE, you should configure PPPoE.

You can find more information on connection protocols in the Internet Connection Configuration Guide.

### Dial-in clients

There are different ways to dial in, depending on the operating system on your computer and your preferences.

Dial-in method:		canbeusedonfollowing operating system:	For more information, see:
Embedded PPP dial-in client:			
<b>1</b>	Dial-in client on embedded pages	Windows, Mac, unix, other	“3.1 SpeedTouch™ Web Pages”
<b>2</b>	Windows XP/UPnP (Internet Gateway Device)	Windows XP	“3.2 Internet Gateway Device Control Agent” on page 33

Embedded PPP dial-in clients

The SpeedTouch™'s embedded PPP dial-in client allows you to establish an Internet connection for computers residing on your local network, using only one computer of the network to control the client.

If this computer runs:

- ▶ Any Operating System  
you can always use the SpeedTouch™ Web pages.  
See "3.1 SpeedTouch™ Web Pages" on page 31 to proceed.
- ▶ Windows XP  
you can use the Windows XP Internet Gateway Device Control Client.  
See "3.2 Internet Gateway Device Control Agent" on page 33 to proceed.

Broadband host PPPoE dial-in clients

You can also connect to the Internet using a Broadband PPPoE dial-in application. The PPP over Ethernet connection scenario provides PPP-like dial-in behaviour over the virtual Ethernet segment.

To be able to use a broadband dial-in application on your computer for connecting to the Internet, the SpeedTouch™ needs to be configured for Bridged Ethernet or Routed PPPoE (with PPPoE relay) via the SpeedTouch™ Home Install Wizard on the Setup CD or the embedded Easy Setup. .

If your computer runs ...	you can use ...
Windows XP	the Windows XP broadband dial-in client
Mac OS X	a Mac OS X broadband dial-in client
	a broadband PPPoE dial-in client provided by you Service Provider



Upon availability of OS-specific PPPoE dial-in client applications, the latter method is Operating System independent.

For PPPoE session connectivity from a Mac OS 8.6/9.x, a Windows 95/98(SE)/ME/2000 or a Linux system, a host PPPoE dial-in application is mandatory.



## 3.1 SpeedTouch™ Web Pages

### Introduction

As the SpeedTouch™ Web pages are controllable from any Operating System with an installed Web browser, the method to establish PPP sessions described later, can be used on any computer system.

For more information on Internet connection setup, refer to the provided Installation and Setup Guide.

### Starting an Internet session

Proceed as follows to start an Internet session:

- 1 Open a Web browser on your computer and browse to the SpeedTouch™ Web pages (see “1.2.1 Access via the Web Interface” on page 7 for more information).



The SpeedTouch™ home page appears by default.

- 2 Click **Connect** at the appropriate broadband connection.



You might be requested to enter your user name and password.

The SpeedTouch™ embedded PPP dial-in client establishes the Internet connection.

- 3 Browse the Web.

### Monitoring your Internet connection

You can view and monitor your connection to the Internet as long as the session is running via:

- ▶ The SpeedTouch™ System Information page: see “4.3.1 Information” on page 44.
- ▶ The SpeedTouch™ Diagnostics task: see “4.4.1 Connectivity Check” on page 53.

#### Terminating an Internet session

---

Proceed as follows to close an active PPP connection:

- 1** Go to the SpeedTouch™ Web pages.
- 2** Click **Disconnect** at the appropriate broadband connection.

The SpeedTouch™ embedded PPP dial-in client closes the Internet connection. The Internet Link status changes to **Disconnected** and your computer is offline.

## 3.2 Internet Gateway Device Control Agent

**Introduction** Windows XP users can easily establish PPP sessions, thanks to the Windows XP Internet Gateway Device (IGD) Discovery and Control Client that allows you to control the SpeedTouch™ directly from you computer.



The IGD Control Client only allows to connect or disconnect a fully configured connection.

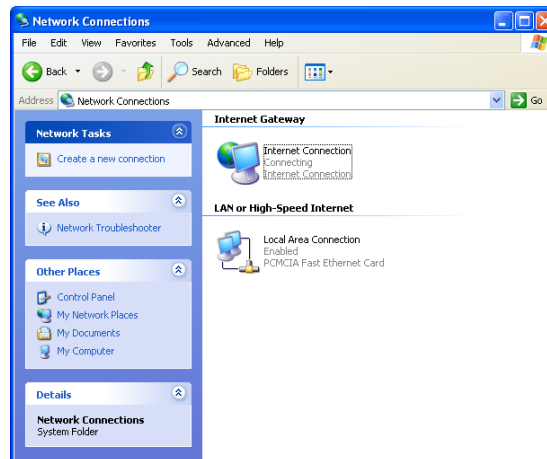
**Preconditions** Make sure that:

- ▶ The following subcomponents of the Windows XP Networking Services are added to your Windows XP system:
  - ▶ UPnP™ (see “ SpeedTouch™ not detected by UPnP™ or IGD Control Client” on page 192).
  - ▶ IGD Discovery and Control Client (see “ Adding IGD Discovery and Control” on page 193).
- ▶ UPnP™ is enabled on your SpeedTouch™. To enable UPnP, see “4.5.2 Game & Application Sharing” on page 59.

**Starting an Internet session**

Proceed as follows to start an Internet session:

- 1** In the Windows taskbar, click **Start**.
- 2** Select **(Settings >) Control Panel**.  
The **Control Panel** window appears.
- 3** Go to **(Network and Internet Connections >) Network Connections**.  
The **Network Connections** window appears.



You will find an **Internet Gateway** icon, representing the SpeedTouch™ IGD Internet connection ability.

- 4** Double-click the **Internet Connection** icon.  
The SpeedTouch™ embedded PPP dial-in client establishes the Internet connection. The **Internet Gateway** icon displays **Connected** and your computer is online.
- 5** Open a Web browser and surf the Internet.

### Internet connection status

As long as the SpeedTouch™ embedded PPP dial-in client is connected, you can view the connection status and some counters by double-clicking the **Internet Connection** icon in the **Network Connections** window.



### Terminating an Internet session

Proceed as follows to terminate an Internet session:

- 1** In the Windows taskbar, click **Start**.
- 2** Select **(Settings >) Control Panel > (Network and Internet Connections >) Network Connections**.
- 3** In the **Network Connections** window, right-click the **Internet Connection** icon and select **Disconnect** to close the session.



You can also double-click the icon. Then the **Internet Connection Status** window will appear on which a **Disconnect** button is available to close the session.

- 4** The SpeedTouch™ embedded PPP dial-in client will close the Internet connection. The **Internet Gateway** icon displays **Disconnected** and your computers are offline.

## 4 Basic Configuration

---

**Embedded** The SpeedTouch™ comes with embedded Web pages, providing an interface to the software installed on the device. It allows easy setup and management of the SpeedTouch™ via your Web browser from any PC connected to the SpeedTouch™. See “1.2.1 Access via the Web Interface” on page 7 to access the pages.

---

**Basic and Expert Mode** The pages are grouped in:

- ▶ Basic Mode: offering the main configuration tasks
- ▶ Expert Mode: adding advanced features to the basic mode and presenting the Command Line Interface (CLI) commands in a graphical user interface.

---

**SpeedTouch™ documentation** Consult:

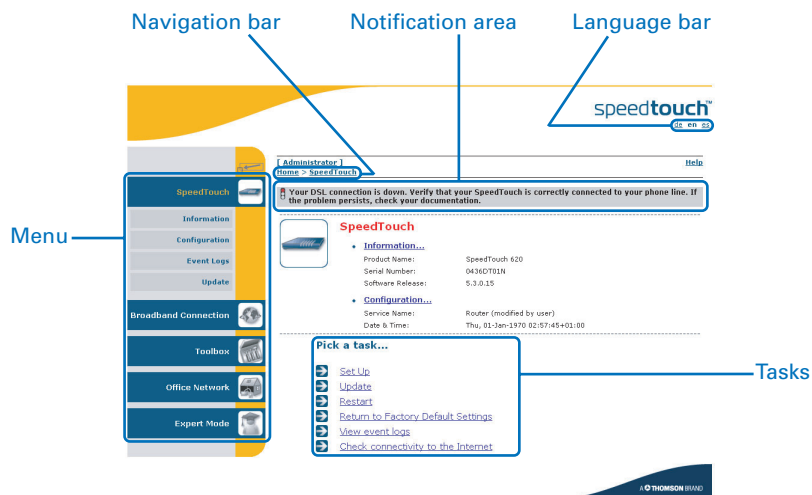
- ▶ The SpeedTouch™ Installation and Setup Guide for more information on setup and installation procedures.
- ▶ The SpeedTouch™ Application Notes and Configuration guides for advanced configuration concepts.

## 4.1 Navigation

### Navigation components

The SpeedTouch™ Web interface consists of the following components:

- ▶ Menu
- ▶ Language Bar
- ▶ Navigation Bar
- ▶ Notification Area
- ▶ Tasks



## 4.1.1 Menu

---

**Menu items** The menu is located on the left side of the page and consists of the following menu items:

- ▶ **SpeedTouch:**  
Provides basic information on the SpeedTouch™.
- ▶ **Broadband Connection:**  
Allows you to view/configure your broadband connections.
- ▶ **Toolbox:**  
Allows you to assign games or applications to a device and secure your Internet connection.
- ▶ **Office Network:**  
Allows you to manage your local network.
- ▶ **Expert Configuration Mode:**  
Allows you to go to [Expert Configuration](#) mode for advanced configuration and maintenance of your SpeedTouch™ device.

**Collapsing and expanding the menu**

---

You can collapse/expand the menu by clicking the arrow located at the top of the menu.



## 4.1.2 Language Bar

### Language bar

---

The language bar is located under the SpeedTouch™ logo and allows you to change the language of the SpeedTouch™ Web interface.



The language bar will only be shown if more than one language is available.



## 4.1.3 Navigation Bar

---

Navigation bar The navigation bar is located at the top of the page and allows you to:


- ▶ View the current user name.  
Click this name to change your password or switch to another user.
- ▶ View the current position on the SpeedTouch™ Web interface.
- ▶ Get context-related **Help** information.

---

Display level Depending on the page you are viewing, the following buttons will be available:

- ▶ **Overview** to view a summary of the current status or configuration.
- ▶ **Details** to view more detailed information on the current status or configuration.
- ▶ **Configure** to change the current settings.

## 4.1.4 Notification Area

- 
- Notification area
- The notification area is located under the [Navigation Bar](#) and is used to display:
- ▶ Error messages, indicated by a red traffic light.
  - ▶ Warnings, indicated by an orange traffic light.
  - ▶ Information, indicated by a green traffic light.
-  If none of these events occur, the notification area will not be shown.

## 4.1.5 Tasks

---

**Tasks** To allow a quick configuration of your SpeedTouch™, some pages may offer you a number of related tasks in the **Pick a task** list. These tasks will guide you to the page where you can perform the selected task.

## 4.2 Home

SpeedTouch™ home page

The SpeedTouch™ home page gives you a short overview of all the configurable aspects of the SpeedTouch™:

- ▶ SpeedTouch
- ▶ Broadband Connection
- ▶ Toolbox
- ▶ Office Network

The screenshot shows the SpeedTouch home page. At the top right is the 'speedtouch™' logo. On the left is a vertical navigation menu with icons and labels for 'SpeedTouch', 'Broadband Connection', 'Toolbox', 'Office Network', and 'Expert Mode'. The main content area is titled '[ Administrator ] Home' with a 'Help' link. It features four sections: 1. 'SpeedTouch' with an 'Information' link, 'Product Name: SpeedTouch XXXX', 'Software Release: X.X.X.X', and an 'Update' button. 2. 'Broadband Connection' with an 'Internet' link, 'Disconnected' status, and a 'Connect' button. 3. 'Toolbox' with links for 'Remote Assistance' (Disabled), 'Game & Application Sharing', 'Firewall' (Disabled), and 'Web Site Filtering'. 4. 'Office Network' with an 'Ethernet' link and the address 'Unknown-00-0d-88-4f-a8-f6'. The bottom right corner of the page has the text 'A THOMSON BRAND'.

## 4.3 SpeedTouch

The SpeedTouch menu

The **SpeedTouch** menu consists of the following items:

- ▶ Information
- ▶ Configuration
- ▶ Event Logs
- ▶ Update

The SpeedTouch page

The **SpeedTouch** page gives you some basic information on the SpeedTouch™:

- ▶ Product Information
- ▶ Configuration



## 4.3.1 Information

### Information

The **Information** page summarizes important information on your SpeedTouch™. You may need this information when you contact your helpdesk.



#### System Information

This page summarizes important information on your SpeedTouch. You may need this information when you contact your helpdesk.

Product Name:	SpeedTouch XXX
Serial Number:	0452DT108
Software Release:	X.X.X.X
Software Variant:	AA
Boot Loader Version:	1.0.16
Product Code:	35723430
Board Name:	BANT-K

## 4.3.2 SpeedTouch™ Easy Setup

### Easy Setup Wizard

The Easy Setup Wizard helps you to configure your SpeedTouch™ Internet connection.

Proceed as follows to configure the SpeedTouch™ using the SpeedTouch™ Easy Setup wizard:

- 1** In the left menu, click **SpeedTouch**.
- 2** In the **Pick a task** list, click **Set up**.

The **Easy Setup** wizard will now guide you through the configuration of your SpeedTouch™.



### 4.3.3 Restart

#### Restarting your SpeedTouch™

Proceed as follows:

- 1 In the left menu, click **SpeedTouch**.
- 2 In the **Pick a task** list, click **Restart**. The following message appears:



**Warning: System Restart**

You are about to restart your SpeedTouch. All active connections will be restarted.

Do you want to proceed?

Yes, restart my SpeedTouch

No

- 3 Click **Yes, restart my SpeedTouch**.  
The SpeedTouch™ restarts.  
The SpeedTouch™ returns to the [Home](#) page.



## 4.3.4 Configuration

**Overview** The **Overview** page displays the current configuration of your SpeedTouch™.

**Details** The **Details** page displays more detailed information on the current configuration of your SpeedTouch™.

**Configure** The **Configure** page allows you to change the current configuration.



### System Configuration

This page lets you configure your SpeedTouch.

- Service Configuration**

You cannot directly edit the service settings of your SpeedTouch. In order to modify those settings, you must use the [Configuration Wizard](#) and follow the instructions appearing on the screen.

Service Name: Routed PPPoE on 0/35 and 8/35

- Time Configuration**

Auto-configuration:

Date (dd-mm-yyyy):  -  -

Time (hh:mm:ss):  :  :

Timezone: (UTC+01:00) Amsterdam, Bern, Rome, Stc

Summer Time:

- System Configuration**

Web Browsing Interception: Disabled

Apply Cancel

If you want to:

- ▶ Reconfigure your SpeedTouch™:  
Click **Configuration Wizard** under **Service Configuration**. For more information, see "4.3.2 SpeedTouch™ Easy Setup" on page 45.
- ▶ Configure the time settings of your SpeedTouch™:
  - ▶ Select **Auto-configuration** if you want the SpeedTouch™ to use a time server to synchronise its clock to a dedicated time server.
  - ▶ Clear **Auto-configuration** to manually configure the SpeedTouch™ time settings.
- ▶ Disable/enable Web browsing interception or set it to automatic:  
In the **Web Browsing Interception** list, click the Web browsing interception setting of your choice.



If you disable Web browsing interception or set it to automatic you will not be able to use [Web Site Filtering](#).

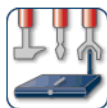
Click **Apply** to apply and save your settings.

## 4.3.5 Back up & Restore

### Introduction

The **Back up & Restore** page allows you to:

- ▶ Save your current configuration.
- ▶ Restore a previously saved configuration.



### Backup & Restore

This page enables you to save and restore the configuration of your SpeedTouch. Follow instructions below...

- **Backup current configuration**

In order to store the current configuration of your SpeedTouch, click on the 'Backup Configuration Now...' button. You will be prompted by your web browser to store the configuration file locally on your hard disk. Choose a location and store the file on your computer.

Backup Configuration Now...

- **Restore saved configuration**

You can restore a configuration file you have previously stored on your computer.

Click on 'Browse', choose the configuration file you want to restore on your SpeedTouch and click on 'Restore Configuration Now...' to restore the configuration.

Configuration File:

Browse...

Restore Configuration Now...

### Accessing the Backup & Restore page

Proceed as follows:

- 1** In the **SpeedTouch** menu, click **Configuration**.
- 2** Click **Configure**.
- 3** In the **Pick a task** list, click **Save or Restore Configuration**.

### Saving your current configuration

Proceed as follows:

- 1** Click **Back up Configuration Now**.
- 2** Click **Save**.
- 3** Choose a location to save your backup file and click **Save**.

### Restoring a previously saved configuration

Proceed as follows:

- 1** Click **Browse**.
- 2** Select the configuration file you want to restore and click **Open**.
- 3** Click **Restore Configuration Now**.

The SpeedTouch™ loads your configuration and restarts.

At the end of the procedure, the SpeedTouch™ returns to the [Home](#) page.

## 4.3.6 Reset to Factory Defaults

### Introduction

The **Reset to Factory Defaults** page allows you to reset the SpeedTouch™ to return to the initial configuration of your SpeedTouch™. All your changes will be deleted. The following message appears:



**Warning: Reset to Factory Defaults**

You are about to reset your SpeedTouch to factory default settings. All active connections will be disconnected.

Do you want to proceed?

Yes, reset my SpeedTouch

No

### Resetting the SpeedTouch™ factory defaults

Proceed as follows:

- 1** In the left menu, click **SpeedTouch**.
- 2** In the **Pick a task** list, click **Return to Factory Default Settings**.
- 3** Click **Yes, reset my SpeedTouch**.



If you reset your SpeedTouch™ to factory default settings, all active connections will be disconnected.

## 4.3.7 Event Logs

### Event Logging

The **Event Logs** page summarizes the last events recorded on your SpeedTouch™.








#### Event Logging

This page summarizes the last events that have been recorded on your SpeedTouch. Choose a display filter...




Category:

#### Recorded Events

Time	Message
 00:23:11 (since last boot)	DHCS server up
 00:23:10 (since last boot)	DHCS server went down
 00:00:04 (since last boot)	DHCS server up
 00:00:03 (since last boot)	WIRELESS interface turned on.
 00:00:03 (since last boot)	WIRELESS automatic channel selection done (channel = 1)

### Recorded Events

The **Recorded Events** table gives you an overview of the last event logs that have been recorded since the SpeedTouch™ was turned on. The first column of the table indicates the importance of the event log.

Indicator	Description
	Informational
	Warning
	Error

### Category

The **Category** list allows you to filter the events shown in the **Recorded Events** table. For example, by clicking **Security** you can view all security related events, for example generated by the SpeedTouch™ firewall.

## 4.3.8 Update

Updating the SpeedTouch™ system software

The **Update** page allows you to:

- ▶ View System Information.
- ▶ View information on the current System Firmware.
- ▶ Update your SpeedTouch™ from a remote server. Use this option if you want your SpeedTouch™ to check the internet for new firmware and update if it found one.
- ▶ Update from a PC. Use this option if you want to install an update on your SpeedTouch™ that is located on the PC.



### System Update

This page allows you to update your SpeedTouch with the latest software version available. Choose a way to update your SpeedTouch and follow the instructions.

#### • System Information

Product Name:	SpeedTouch 585
Serial Number:	0452DT108
Boot Loader Version:	1.0.16
Product Code:	35723430
Board Name:	BANT-K

#### • System Firmware

Current Software Version:	5.3.0.15
Current Software Variant:	AA
Available Software Version:	No update available

### Update SpeedTouch from remote server...

➔ To check if a new software version is available click on 'Check For Updates...'

Check For Updates

### Upgrade from PC

➔ To update your SpeedTouch from your PC, you may follow the three steps described below.

#### 1-Download the latest software to your PC.

You may update your SpeedTouch by downloading the latest software from the [SpeedTouch Support Site](#) to your PC's hard drive.

#### 2-Upload software to your SpeedTouch

Select the update file you have placed on your PC's hard drive.

Browse...

#### 3-Load the new software and restart your SpeedTouch

Note: uploading the new software takes several minutes to complete.

Proceed

## 4.4 Broadband Connection

The Broadband Connection menu

The **Broadband Connection** menu consists of following menu items:

- ▶ DSL Connection
- ▶ Internet Services

The Broadband Connection page

The **Broadband Connection** page gives you a short status overview of the connections configured on the SpeedTouch™.

The screenshot shows the SpeedTouch interface. On the left is a vertical navigation menu with icons and labels: SpeedTouch, Broadband Connection (highlighted), DSL Connection, Internet Services, Toolbox, Office Network, and Expert Mode. The main content area has a header with 'speedtouch™' and navigation links like '[ Administrator ]', 'Home > Broadband Connection', and 'Help'. Below this, there are two connection status sections. The first is 'DSL Connection' with a house icon and a green checkmark. It lists 'View more...', 'Uptime: 0 days, 4:19:19', 'Bandwidth (Up/Down) [kbps/kbps]: 640 / 6.144', and 'Data Transferred (Sent/Received) [KB/KB]: 0,00 / 0,00'. The second is 'Internet' with a globe icon and a red X. It lists 'View more...', 'Link Status: Disconnected', 'Type: PPPoE', and 'Last Error Message: None'. A 'Connect' button is positioned to the right of the Internet status. At the bottom, there is a 'Pick a task...' section with a blue arrow icon and a link 'Check connectivity to the Internet'.

Click **View more** to see more information on the selected broadband connection.



If you configured a dial-up connection, you can establish/terminate the connection by clicking **Connect/Disconnect**.

## 4.4.1 Connectivity Check

### Introduction

On this page, you can perform a connectivity check on an Internet service of your SpeedTouch™. The following message appears:



#### Connectivity Check

This page enables you to perform a connectivity check on an Internet service of your SpeedTouch.

Choose an Internet service and click the button to launch the tests.

Internet Service to Check:

### Checking your Internet connectivity

Proceed as follows:

- 1** In the left menu, click **Broadband Connection**.
- 2** In the **Pick a task** list, click **Check connectivity to the Internet**.
- 3** In the **Internet Service to Check** list, click the Internet service that you want to check.
- 4** Click **Check Connectivity**.

The SpeedTouch™ lists the test results in the **Test Results** list.

### Analysing the test results

If the test is successful, you will get a list of green check marks. Otherwise a red cross will indicate which tests have failed.



#### Connectivity Check

This page enables you to perform a connectivity check on an Internet service of your SpeedTouch.

Choose an Internet service and click the button to launch the tests.

Internet Service to Check:

#### • Test Results



DSL



ATM



Ethernet



PPP



IP



Internet



Connectivity to Gateway (101.101.101.1)



Connectivity to DNS Server 1 (10.50.2.20)



Connectivity to DNS Server 2 (10.50.2.21)

## 4.4.2 DSL Connection

Overview Click **Overview** to view basic information on your DSL connection.

Details Click **Details** to view more detailed information on your DSL connection.



### DSL Connection

- **Link Information**

Uptime:	4 days, 4:19:08
Modulation:	G.992.1 Annex A
Bandwidth (Up/Down) [kbps/kbps]:	512 / 4.640
Data Transferred (Sent/Received) [MB/MB]:	36,15 / 385,19
Output Power (Up/Down) [dBm]:	11,5 / 19,5
Line Attenuation (Up/Down) [dB]:	14,0 / 25,0
SN Margin (Up/Down) [dB]:	19,0 / 19,5
Vendor ID (Local/Remote):	TMMB / ALCB
Loss of Framing (Local/Remote):	0 / 0
Loss of Signal (Local/Remote):	0 / 0
Loss of Power (Local/Remote):	0 / 0
Loss of Link (Remote):	0
Error Seconds (Local/Remote):	0 / 0
FEC Errors (Up/Down):	0 / 0
CRC Errors (Up/Down):	0 / 0
HEC Errors (Up/Down):	0 / 0



### 4.4.3 Internet Services

Internet Services information

The **Internet Services** page displays information on your Internet Connection(s).



**Internet**

Disconnect

- [View more...](#)

Type:	PPPoE
Uptime:	1 day, 4:14:25
IP Address:	217.136.53.59
Data Transferred (Sent/Received) [MB/MB]:	14,70 / 328,71



If you configured a dial-up connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

To view more detailed information on a specific connection, click the **View more** link of the corresponding connection.

## 4.4.4 Internet Service Settings

Accessing the Internet Service Settings page

Proceed as follows:

- 1 In the **Broadband Connection** menu, click **Internet Services**.
- 2 Click the **View more** link of the Internet service you want to view.

Overview

The **Overview** page gives you basic information on the selected Internet Service.



If you configured a connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

Details

The **Details** page gives you more detailed information on the selected Internet Service.



### Internet

Disconnect

- **Connection Information**

Uptime: 1 day, 4:13:24  
Data Transferred (Sent/Received) [KB/B]: 14,65 / 325,99

- **Connection Settings**

PVC Info (VPI.VCI): 8.35  
Type: PPPoE

- **PPP Settings**

Username: cpesit@rednet  
Password: \*\*\*\*\*  
Connection Mode: Always-On  
Service Name: -  
Concentrator Name: 15031100007146-Redback

- **TCP/IP Settings**

IP Address: 101.101.101.39/32  
Default Gateway: 101.101.101.1  
Primary DNS: 10.50.2.20  
Secondary DNS: 10.50.2.21



If you configured a dial-up connection you can establish/terminate the connection by clicking **Connect/Disconnect**.

## 4.5 Toolbox

The Toolbox menu

The **Toolbox** menu consists of the following menu items:

- ▶ [Remote Assistance](#)  
Allows you to make your SpeedTouch™ accessible for remote support.
- ▶ [Game & Application Sharing](#)  
Allows you to share services and games that you run in your private network towards the Internet.
- ▶ [Web Site Filtering](#)  
Allows you to block/allow access to specific Web sites.
- ▶ [Firewall](#)  
Allows you to configure the security level of the SpeedTouch™ firewall.
- ▶ [Intrusion Detection](#)  
Allows you to view the intrusions you are protected against.
- ▶ [Dynamic DNS](#)  
Allows you to assign a DNS host name to your broadband connection(s).
- ▶ [User Management](#)  
Allows you to manage the users configured on your SpeedTouch™.

The Toolbox page

The **Toolbox** page gives you an overview of the available services and their current status. You can click on the names of these services to go to the corresponding Web page.

The screenshot shows the SpeedTouch web interface. At the top right is the 'speedtouch™' logo. Below it, a navigation bar includes '[ Administrator ]', 'Home > Toolbox', and a 'Help' link. A left-hand menu lists various settings: SpeedTouch, Broadband Connection, Toolbox (highlighted), Remote Assistance, Game & Application Sharing, Web Site Filtering, Firewall, Intrusion Detection, Dynamic DNS, User Management, Office Network, and Expert Mode. The main content area is titled 'Toolbox' and contains the following information:

- Toolbox**: Your SpeedTouch device offers multiple services. Those services enable you to protect your network, to ease sharing of games and applications with other people on the Internet, or manage your local network.
- Remote Assistance**: Disabled
- Game & Application Sharing**: UPnP: Enabled
- Web Site Filtering**: Address Filtering: Enabled, Content Filtering: Disabled
- Firewall**: Security Level: Disabled
- Intrusion Detection**: Enabled
- Dynamic DNS**: Disabled
- User Management**: Logged In As: Administrator, [Switch User](#)

At the bottom right of the page, there is a 'THOMSON BRAND' logo.

## 4.5.1 Remote Assistance

### Enabling Remote Assistance

The **Remote Assistance** page allows you to make your SpeedTouch™ accessible for remote support.



#### Remote Assistance

Remote assistance is currently disabled.

By clicking on the 'Enable Remote Assistance' button your SpeedTouch will be accessible from your broadband connection. After 20 minutes of inactivity, or on reboot, remote assistance will be automatically disabled.

Provide the following parameters to your ISP:

URL:

Username:

Password:

Enable Remote Assistance

Quit



If you want to enable remote assistance, you must be connected to the Internet.

Proceed as follows to use remote assistance:

- 1 If necessary, type a password in the **Password** box.
- 2 Click **Enable Remote Assistance**.
- 3 Pass the information listed under:
  - ▶ **URL**
  - ▶ **Username**
  - ▶ **Password**

to your technical support, in order for them to be able to access your SpeedTouch™.



Once the technical support is connected, no other connections can be made.

### Terminating remote assistance

The remote assistance session ends:

- ▶ if the technical support disables remote assistance.
- ▶ after 20 minutes of inactivity.
- ▶ after restarting your SpeedTouch™.

## 4.5.2 Game & Application Sharing

---

**Overview** The **Overview** page summarizes the applications or games installed on a particular local host on your network, for which the SpeedTouch™ should accept inbound initiated connections coming from the Internet.

---

**Configure** On the **Configure** page, you can:

- ▶ Select **Use UPnP** to enable UPnP on the SpeedTouch™. UPnP provides NAT-Traversal: UPnP aware applications on a PC will automatically create Hyper-NAT entries on the SpeedTouch™ for incoming traffic on the protocol ports this type of traffic needs. As a consequence these applications are able to traverse the SpeedTouch™ without the need for extra and manual configuration.



UPnP is an architecture for transparent peer-to-peer connectivity of computers, intelligent appliances, and (wireless) devices. It enables seamless operation of a wide range of games and messaging applications.

- ▶ For security reasons you are able to configure the UPnP policy towards Windows XP and UPnP aware applications and Operating Systems.

In case you select the **Use Extended Security** check box, only limited UPnP operation between a host running MS Windows XP and the SpeedTouch™ is allowed: A local host is:

- ▶ NOT allowed to connect/disconnect the SpeedTouch™ Internet Gateway Device (IGD) connection.
- ▶ Allowed to add/delete Hyper-NAT entries only for its own IP address, not for other local hosts.

If you clear the **Use Extended Security** check box, all UPnP- and IGD-based communication between any local host and the SpeedTouch™ is allowed.

► Assign a game or application to a specific network device.



### Game & Application Sharing

This page summarizes the games and applications defined on your SpeedTouch. Each game or application can be assigned to a device on your local network.

- **Universal Plug and Play**

Universal Plug and Play (UPnP) is a technology that enables seamless operation of a wide range of games and messaging applications.

Use UPnP:

Use Extended Security:

Apply Cancel

- **Assigned Games & Applications**

Click on 'Unassign' to disable a game or a application or use the last row in the table to assign a game or application to a local network device.

If the game or the application you are looking for does not exist, [click here](#) to create it (you will be asked for game or application details).

Choose 'User-defined' in the device list and enter its IP address if the device you are looking for does not appear in the device list.

Game or Application	Device	Log		
<a href="#">FTP Server</a>	<a href="#">YourPC</a>	Off	<a href="#">Edit</a>	<a href="#">Unassign</a>
<a href="#">HTTP Server (World Wide Web)</a>	<a href="#">YourPC</a>	Off	<a href="#">Edit</a>	<a href="#">Unassign</a>
<a href="#">NetMeeting</a>	<a href="#">YourPC</a>	Off	<a href="#">Edit</a>	<a href="#">Unassign</a>
ABC (Another Bittorrent Client) ▾	YourPC ▾	<input type="checkbox"/>		Add

### 4.5.3 Defined Games & Applications

Accessing the Defined Games & Applications page

Proceed as follows to access the **Defined Games & Applications** page:

- 1 In the **Toolbox** menu, click **Game & Application Sharing**.
- 2 In the **Pick a task** list, click **Modify a game or application**.

The Defined Games & Applications page

This page gives you an overview of the games and applications defined on your SpeedTouch™. Each game or application can be assigned to a device on your local network.



#### Defined Games & Applications

This page summarizes the games and applications defined on your SpeedTouch. Each game or application can be assigned to a device on your local network.

Game or Application	Assigned to ...	Mode
<a href="#">ABC (Another Bittorent Client)</a>	Client	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Age of Empires</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Age of Mythology</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">AIM Talk</a>	Client	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Aliens vs. Predator</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">America s Army</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Azureus</a>	Client	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Bay VPN</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">BearShare</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">BitTorrent</a>	Client	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Black and White</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Call of Duty</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Call of Duty - United Offensive</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">CarbonCopy32</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Castle Wolfenstein</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Championship Manager 03-04</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Checkpoint FW1 VPN</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Command and Conquer Generals</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Command and Conquer Zero Hour</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Counter Strike</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Cu-SeeMe Cornell</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Cu-SeeMe White Pine 3.1.2 and 4.0</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Dark Reign 2</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Default Server</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Delta Force</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Destroyer Command</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Diablo II</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Direct Connect</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">DirectX 7</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">DirectX 8</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">DirectX 9</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Doom3</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Dune 2000</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Dungeon Siege</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">eDonkey</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Elite Force</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">eMule</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Enemy Territory</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Everquest</a>	Server	<a href="#">Edit</a> <a href="#">Delete</a>

If you want to:

- ▶ View the translation rules of a game or application, click the name of the rule.
- ▶ Change the translation rules of a game or application, click the **Edit** link of the game or application.
- ▶ Remove a game or application from your SpeedTouch™, click the **Delete** link of the game or application.

## 4.5.4 Game or Application Definition

Accessing the Game or Application Definition page

Proceed as follows to access the **Game or Application Definition** page:

- 1** In the **Toolbox** menu, click **Game & Application Sharing**.
- 2** In the **Pick a task** list, click **Modify a game or application**.
- 3** Click the name of the game or application you want to view/change.

Overview

This page gives you an overview of the port mappings used to allow this service or game to be initiated from the Internet.



Consult the user's guide or support pages of your application to know which ports are being used by this application.

A service consists of one or more TCP/UDP port ranges. Each incoming port range can be translated into a different internal (local network) port range. Port ranges can be statically assigned to devices or dynamically assigned using an outgoing trigger.

Configure

Under:

- ▶ **Game or Application Name** you can:  
Change the name of the game or application.
- ▶ **Game or Application Definition** you can:  
Change the TCP/UDP port definition for this game or application.



### Lotus Notes

- **Game or Application Name**

New Name:

- **Game or Application Definition**

A game or application is made of one or more TCP/UDP port ranges. Each incoming port range can be translated into a different internal (local network) port range. Port ranges can be statically assigned to devices or dynamically assigned using an outgoing trigger.

Protocol	Port Range	Translate To ...	Trigger Protocol	Trigger Port	
Any	1352 - 1352	1352 - 1352	-	-	<a href="#">Edit</a> <a href="#">Delete</a>
Any	<input type="text"/> to <input type="text"/>	<input type="text"/>	Any	<input type="text"/>	<input type="button" value="Add"/>



## Adding a Port Translation rule

Proceed as follows:

- 1** Click the **Edit** link of the TCP/UDP port definition of the game or application.
- 2** In the **Protocol** list, click the protocol the game or application uses.
- 3** In the **Port Range** box, type the port range the game or application uses.
- 4** In the **Translate To** box, type the port range to which the SpeedTouch™ has to translate the ports specified under **Port Range**.
- 5** If you want to make a dynamic translation rule you must specify a trigger protocol and port.



As soon as the SpeedTouch™ receives outgoing traffic on this trigger port, it will activate this translation rule.

- 6** Click **Apply**.

## 4.5.5 New Game or Application

Creating a new game or application

Proceed as follows:

- 1 In the **Toolbox** menu, click **Game & Application Sharing**.
- 2 In the **Pick a task** list, click **Create a new game or application**. The following window appears:

---



**New Game or Application**  
Enter the name of the new game or application.

Name:

Select how you want to define the new game or application.

Clone Existing Game or Application

Manual Entry of Port Maps

- 3 Type the name of the game or application in the **Name** box.
- 4 Click:
  - ▶ **Clone Existing Game or Application** if you want to start from the port mappings of the selected game or application.
  - ▶ **Manual Entry of Port Maps** if you want to manually configure the port mapping for this game or application.

The SpeedTouch™ creates the game or application and takes you to the [Game or Application Definition](#) page to configure the port mappings for this game or application.

- 5 Enter the necessary port mappings and click **Add**.

## 4.5.6 Web Site Filtering

### Web Site Filtering

The SpeedTouch™ allows you to block/allow particular Web sites:

- ▶ Based on the Web site's URL.



As within a Web site lots of references can be made to other URLs, it is recommended to use this feature in combination with content based filtering.

- ▶ Based on the Web site's content.
- ▶ By redirecting a Web site to another Web site.



If your administrator account is configured as default user, make sure you configure a password for this account or change the default user. Otherwise users on your local network can browse to your SpeedTouch™ to disable your filtering rules.

For more information, see "4.5.13 User Management" on page 77 and "4.5.15 Change Default User" on page 80.

### Overview

The **Overview** page displays:

- ▶ The current **Address Based Filtering** rules.
- ▶ The current **Content Based Filtering** configuration.  
To view which content types are blocked/allowed, click **Details**. For more information, see "4.5.8 Content Level" on page 69.



Address based filtering rules have priority over content based filtering rules.

### Configure

On the **Configure** page, you can:

- ▶ Deny access to a specific web site.
- ▶ Allow access to a specific Web site.
- ▶ Redirect a Web site.
- ▶ Configure content based filtering settings.

### Content levels

The following content levels are available:

- ▶ **All:**  
Allow all categorized Web sites.
- ▶ **Legal:**  
Allow all except illegal, extreme, spam and spyware Web sites.
- ▶ **Teenagers:**  
Block illegal, adult, extreme, online ordering/gambling, spam and spyware Web sites.
- ▶ **Children:**  
Only allow children-safe Web sites.
- ▶ **BlockAll:**  
Block all categorized Web sites.

---

Deny access to a specific Web site

Use this feature if:

- ▶ **Allow** is selected under **Action for Unknown Sites**.
- ▶ **Block** is selected under **Action for Unknown Sites** and you want to make an exception on an allow rule. For example: you are allowing "provider.com" but you want to deny access to "mail.provider.com".
- ▶ A content category/group is allowed by Content Based Filtering and you want to make an exception. For example: you are allowing **Web Mail** content but you want to deny access to "mail.provider.com".

Proceed as follows:

- 1** Type the URL of the Web site you want to block (for example "mail.provider.com") in the **Web Site** box.
- 2** In the **Action** list, click:
  - ▶ **Block** if you want to block this Web site.
  - ▶ **Redirect** if you want to redirect to another page. Type the address of the redirect page in the **Redirect** box.
- 3** Click **Add**.

---

Allow access to a specific Web site

Use this feature if:

- ▶ **Block** is selected under **Action for Unknown Sites**
- ▶ **Allow** is selected under **Action for Unknown Sites** and you want to make an exception on a block/redirect rule. For example: you are blocking "bank.com" but you want to allow access to "netbanking.bank.com".
- ▶ A content category/group is blocked by Content Based Filtering and you want to make an exception. For example: you are blocking **Finance / Investment** content but you want to allow access to "netbanking.bank.com".

Proceed as follows:

- 1** Type the URL of the Web site you want to allow (for example "netbanking.bank.com") in the **Web Site** box.
- 2** Click **Allow** in the **Action** list.
- 3** Click **Add**.

---

Redirect a Web site

Proceed as follows:

- 1** Type the URL of the Web site you want to redirect (for example "cracks.am") in the **Web Site** box.
- 2** Click **Redirect** in the **Action** list.
- 3** Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Redirect** box.
- 4** Click **Add**.

Redirecting all Web sites

Proceed as follows:

- 1** Type "\*" in the **Web Site** box.
- 2** Click **Redirect** in the **Action list**.
- 3** Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Redirect** box.
- 4** Click **Add**.
- 5** Type the URL of the Web site you want to redirect to (for example "mycompany.com/internetpolicy.htm") in the **Web Site** box.
- 6** Click **Allow** in the **Action list**.
- 7** Click **Add**.

Configure content based filtering settings

Under **Content Based Filtering** you can:

- ▶ Enable/disable content based filtering.
- ▶ Allow/block uncategorized Web sites.
- ▶ Select a content level in the **Content Level** list.



To change a content level definition, click the **Edit** link of the content level you want to change. For more information, see "4.5.8 Content Level" on page 69.

## 4.5.7 Web Filtering Activation

Accessing this page

---

Proceed as follows:

- 1 In the **Toolbox** menu, click **Web Site Filtering**.
- 2 In the **Pick a task** list, click **Activate Web Filtering License**.

Web Filtering Activation  
page

---

This page you can:

- ▶ Activate a Web Filtering evaluation license.
- ▶ Activate a free 30-days Web Filtering evaluation license.

Standard license  
activation

---

Proceed as follows:

- 1 Click **Standard**.
- 2 In the **License Key** box, type the license key provided by your ISP.
- 3 Click **Apply**.

## 4.5.8 Content Level

### Accessing the Content Level page




Proceed as follows:

- 1** In the **Toolbox** menu, click **Web Site Filtering**.
- 2** Click **Configure**.
- 3** Click the **Edit** link of the content level you want to edit.

### Overview

The **Content Level** page gives you an overview of the different categories and their rules.

The following icons indicate whether the content type is allowed or not.

Icon	Description
	The category/group is allowed.
	The category/group is not allowed.
	The group is partly allowed.

### Configure

This page allows you to change:

- ▶ The content level name.
- ▶ The content level description.
- ▶ The content level configuration.

## 4.5.9 New Content Level

### Accessing the New Content Level page

On this page you to create a new content level. Proceed as follows to access this page:

- 1 In the **Toolbox** menu, click **Web Site Filtering**.
- 2 In the upper right corner, click **Configure**.
- 3 In the **Pick a task** list, click **Create a new content level**.

### Procedure

To apply a new content level, you must perform the following actions:

- 1 Content level creation
- 2 Content level configuration
- 3 Content level definition
- 4 Content level activation



You can create up to 16 content levels.


### Content level creation

Proceed as follows:

- 1 In the **Name** box, type a name for the new content level.
- 2 In the **Description** box, type a short text to describe what this security level will do.
- 3 Click **Next**.  
The **Configuration** section appears.

### Content level configuration

Proceed as follows:

- 1 Click:
  - ▶ **Clone Existing Level** to start from a previously created content level.  
 If no levels have been defined before, this option will not be shown.
  - ▶ **Black List** to allow all Web sites by default.
  - ▶ **White List** to block all Web sites by default.
- 2 Click **Next**.  
The **Content level definition** section appears.



Content level definition

---

Only Web sites that match the selected content level will be allowed. Proceed as follows:

- 1** If you want to:
  - ▶ Allow a category:  
Select the check box next to the category name.
  - ▶ Allow an entire group:  
Select the check box next to the group name.
  - ▶ Block a category:  
Clear the check box next to the category name.
  - ▶ Block an entire group:  
Clear the check box next to the group name.
- 2** Click **Apply**.

Content level activation

---

To activate your new content level:

- 1** In the **Toolbox** menu, click **Web Site Filtering**.
- 2** In the upper right corner, click **Configure**.
- 3** In the **Content Level** list, select your new content level.
- 4** Click **Apply**.  
The new content level is now active.

## 4.5.10 Firewall

**About the firewall** The firewall allows you to secure traffic from and to the SpeedTouch™. There are different security levels, depending on the degree of security you need.

**Overview** The **Overview** page summarizes the overall security policy configured on your SpeedTouch™.

**Configure** On the **Configure** page you can select the security level of the SpeedTouch™.



### Firewall

This page summarizes the overall security policy configured on your SpeedTouch.

- **Security Settings**

Security Level:

- High  
Use this Security Level to block all outgoing connections except well known applications (DNS, HTTP, HTTPS, FTP, TELNET, IMAP, POP) and block all incoming connections. Game & Application sharing is not allowed by the firewall.
- Medium  
Use this Security Level to allow all outgoing connections except Windows protocols (Netbios, RPC, SMB) and block all incoming connections. Game & Application sharing is allowed by the firewall.
- Standard  
Use this Security Level to allow all outgoing connections and block all incoming traffic. Game & Application sharing is allowed by the firewall.
- Low  
Use this Security Level to allow all outgoing connections and block all incoming traffic except Internet Control Management Protocol (ICMP). Game & Application sharing is allowed by the firewall.
- Disabled  
Disable the firewall. All traffic is allowed to pass through your SpeedTouch. Game & Application sharing is allowed by the firewall.
- BlockAll  
Use this Security Level to block all traffic from and to the Internet. Game & Application sharing is not allowed by the firewall.

Apply Cancel

**Security Levels** Select one of following security levels:

- ▶ **High**  
All outgoing connections are blocked, except for traffic from well-known protocols such as DNS, HTTP, HTTPS, FTP, TELNET, IMAP and POP. All incoming connections are blocked.  
Game and Application Sharing is not allowed.
- ▶ **Medium:**  
All outgoing connections are blocked except MS Windows protocols such as NetBIOS, RPC and SMB. All incoming connections are blocked as well. However, Game and Application Sharing is allowed.
- ▶ **Standard:**  
All outgoing connections are allowed. All incoming connections are blocked, except for inbound connections assigned to a local host via Game and Application Sharing.

- ▶ **Low:**  
All outgoing connections are allowed. All incoming connections are blocked, except for ICMP (Internet Control Management Protocol) and inbound connections assigned to a local host via Game and Application Sharing.
- ▶ **Disabled:**  
All in- and outgoing traffic is allowed to pass through your SpeedTouch™, including Game and Application Sharing. This is the default firewall level.
- ▶ **BlockAll:**  
All traffic from and to the Internet is blocked. Game and Application Sharing is not allowed by the firewall.



Although BlockAll should block all connections, some mandatory types of traffic such as DNS will still be relayed between LAN and WAN via the SpeedTouch™.



The firewall levels only have impact on the forward hook. This means that the handling of traffic from and to the Web pages of the SpeedTouch™ is independent of the selected firewall level.



Protocol checks will be performed on all accepted connections, irrespective of the chosen level. You can only disable protocol checks via the CLI.

#### Details of a security level

To view the details of the currently active security level:

- 1 In the **Toolbox** menu, click **Firewall**.
- 2 Click the **Details** link.

Following information is provided per rule that is part of the security level

- ▶ The **name** of the rule
- ▶ The **Action** that is applied on the traffic when the rule is valid
- ▶ The **Source** and **Destination interface** or **IP address** (range) to which the rule applies
- ▶ The protocol or SpeedTouch™ **Service** for which the rule applies.
- ▶ The number of **Hits** (number of times that the rule was applied to traffic).

#### Creating a new security level



Proceed as follows:

- 1 In the **Toolbox** menu, click **Firewall**.
- 2 In the upper right corner, click **Configure**.
- 3 In the **Pick a task** list, click **Create a new Security Level**.
- 4 In the **Name** box, type a name for the new security level.
- 5 Choose an existing security level to clone from.
- 6 Click **Apply**.

#### Editing a security level

Proceed as follows:

- 1 In the **Toolbox** menu, click **Firewall**.
- 2 In the upper right corner, click **Configure**.
- 3 Select a security level, and then click the **Edit** link.  
The firewall settings of the selected security level appear.
- 4 You can:

- ▶ Select a row using the **Edit** link to modify the security rule.
  - ▶ Click **Add** to create a new security rule.
- 5** Edit or define following parameters of the rule:
- ▶ The **Name** of the security rule
  - ▶ The **Source Interface** and **IP Address** (range)
    -  Use **Any** as IP address in case all traffic for the interface should be parsed.
    - Or you can type a **User-defined** IP address (range).
  - ▶ The **Destination Interface** and **IP Address** (range)
    -  Use **Any** as IP address in case all traffic for the interface should be parsed.
    - Or you can type a **User-defined** IP address (range).
  - ▶ The **Service** type of the traffic; this can be a protocol (dns, smtp, ...) or a specific SpeedTouch™ system service.
- 6** Select an **Action** that should be done on traffic for which the security rules applies:
- ▶ **Accept**: to allow the traffic to pass
  - ▶ **Deny**: to drop the traffic (without notification)
  - ▶ **Count**: to let the traffic pass, but count it (Hits)
- 7** Click **Apply**.

## 4.5.11 Intrusion Detection

### Intrusion Detection

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Your SpeedTouch™ protects your network against malicious intrusions. The **Intrusion Detection** page shows you the intrusions you are protected against. The **Protected Intrusions** table shows the number of times the SpeedTouch™ actively protected your network against each intrusion since last statistics reset.

## 4.5.12 Dynamic DNS

**Dynamic DNS** The Dynamic DNS service allows you to assign a dynamic DNS host name (for example john.dyndns.org) to a broadband connection even if it is using a dynamic IP address. As soon as the device gets a new IP address, the dynamic DNS server updates its entry to the new IP address.

**Overview** Click **Overview** to view the different Dynamic DNS clients with their name, host names, interface and IP address.

**Configure** On the **Configure** page, you can assign a Dynamic DNS host name to a broadband connection. Proceed as follows:

- 1 Create an account at the Dynamic DNS service of your choice, for example:
  - ▶ [www.dyndns.org](http://www.dyndns.org)
  - ▶ [www.no-ip.com](http://www.no-ip.com)
  - ▶ [www.dtdns.com](http://www.dtdns.com)
- 2 On the **Dynamic DNS** page, click **Configure**.
- 3 Select the **Enabled** check box.



### Dynamic DNS Service

- Configuration

Enabled:	<input checked="" type="checkbox"/>
Interface:	Internet
Username:	MyName
Password:	••••••••
Confirm password:	••••••••
Service:	gnudip
Host:	MyDomainName

Apply

- 4 If necessary, click the broadband connection to which you want to assign the Dynamic DNS hostname in the **Interface** list.
- 5 Type the user name and password of your Dynamic DNS service account in the corresponding fields.
- 6 In the **Service** list, click your Dynamic DNS service.
- 7 In the **Host** box, type the host name you want to assign to this interface (for example myspeedtouch.dyndns.org).
- 8 Click **Apply**.

## 4.5.13 User Management

**Overview** The **Overview** page gives you an overview of the currently configured users and their privileges.

Click the name of a user to edit his user account.



### User Management

This page provides you with information regarding the users configured on your SpeedTouch.

- Local User Data

The table below shows the configured users who are able to access your SpeedTouch. You need to configure user privileges if you want to differentiate between people using your SpeedTouch. The current privileges of the user are mentioned in the privileges column.

Username	Privileges	Default User	
<a href="#">Administrator</a>	Administrator	✓	<a href="#">Edit</a>
<a href="#">Jon</a>	User		<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">Melissa</a>	User		<a href="#">Edit</a> <a href="#">Delete</a>
			<a href="#">Add</a>

**Configure** On the **Configure** page, you can:

- ▶ Click **Add** to create a new user account.
- ▶ Click **Edit** to change a user account.
- ▶ Click **Delete** to remove a user.

**Types of users** The table below shows the types of users and their privileges:

User	Privileges
root	This is the root (master) account. This user has all privileges without any exceptions or limitations.
SuperUser	This user can perform any service via any access channel from any access origin.
TechnicalSupport	This user can perform any service via any access channel from WAN origin only.
Administrator	This user can perform any service via any access channel from LAN or Local origin only.
LAN_Admin	This user can perform only LAN related configurations via any access channel from any origin.
Poweruser	This user has access to the GUI (Service/overview page) via HTTP or HTTPS access channel from LAN origin only.

User	Privileges
WAN_Admin	This user can perform only WAN related configurations via any access channel from any origin.
User	This user has access to the GUI (Overview pages, remote assistance) via HTTP or HTTPS access channel from LAN origin only.
Guest	This user does not have any privileges.



## 4.5.14 Edit User

Editing a user account

Proceed as follows:

- 1 In the **Toolbox** menu, click **User Management**.
- 2 Under **Local User Data**, click the name of the user you want to edit.



### Edit User

This page allows you to edit the user settings. Besides resetting your password you're not allowed to change your own settings. If you want to have your settings changed, ask someone with higher privileges.

- **User definition**

Name: Jon

Administration Privileges:

The **Edit User** page appears. On this page, you can:

- ▶ Click **Reset Password** to reset the password of the selected user to the user name. So, if you reset the password of John his password will be "John".
- ▶ Change the administration rights of the selected user.



You can not change the administration rights of the account you are logged on with.

## 4.5.15 Change Default User

The Default User page

On this page you can change the default user. If users browse to the SpeedTouch™ Web pages, they will be automatically logged on with this account.



To allow users to automatically log on under this account, this default user account must be configured with a blank password.

Changing the default user

Proceed as follows:

- 1 In the **Toolbox** menu, click **User Management**.
- 2 In the **Pick a task** list, click Set the default user.
- 3 The **Change Default User** page appears.



### Change Default User

This page allows you to change the default user. The default user is the user whose settings will be chosen as the default login settings.

- **Change Default User**

User Name:

Jon

Change Default User

Cancel

- 4 In the **User Name** list, click the name of the new default user.
- 5 Click **Change Default User** to confirm your choice.

## 4.5.16 Add User

### Adding users

Proceed as follows:

- 1 In the **Toolbox** menu, click **User Management**.
- 2 In the **Pick a task list**, click **Add new user**.
- 3 The **Add User** page appears.



### Add User

This page allows you to add a user. You're only allowed to add a user who has privileges which are the same or lower than your own. The password of the new user will be the same as the account name.

- **User definition**

Name:

Administration Privileges:

- 4 Under **User definition** you can configure:

- ▶ The name of the new user.



The password of the new user will be equal to the user name; for example if the user name is John Doe, the password will be John Doe. Also when resetting a user, the password will be changed into the user name.

- ▶ The administration rights of the new user.



You can only add users with less than or equal administration rights as yourself.

## 4.6 Office Network

### Office Network Menu

The **Office Network** menu consists of the following items:

- ▶ **Devices**  
Allows you to view/configure the devices detected on your local network.
- ▶ **Interfaces**  
Allows you to view/configure the interfaces that are available on the SpeedTouch™.

### The Office Network page

The **Office Network** page gives you an overview of your SpeedTouch™ network.

The screenshot shows the SpeedTouch Office Network page. On the left is a navigation menu with items: SpeedTouch, Broadband Connection, Toolbox, Office Network (highlighted), Devices, Interfaces, and Expert Mode. The main content area is titled 'Office Network' and shows a network diagram. Under 'Wireless', there is a WLAN connection 'WLAN: SpeedTouch123456 (36Mbps)' with a client 'jimmy'. Under 'Ethernet', there are four ports: ethport1 (100Mbps), ethport2 (100Mbps), ethport3 (100Mbps) with a client 'John', and ethport4 (100Mbps). The page also features a breadcrumb trail 'Home > Office Network' and a 'Help' link. The Thomson logo is in the bottom right corner.

### Viewing (wireless) client information

If you click on a (wireless) client you can:

- ▶ View the (wireless) client's network settings.
- ▶ Configure the (wireless) client's network settings by clicking **Configure**.

## 4.6.1 Devices




**Overview** The **Overview** page gives you an overview of the devices that are currently connected to the SpeedTouch™ network. Click on a device name to get more information on a specific device.



### Local Network Devices

- **Detected Device(s)**

The table below contains the list of devices the SpeedTouch detected on your local network. Click on a device name to get more information on a device.

Name	IP Address	Interface
 speedtouch	192.168.1.254	
 <a href="#">edamsdoc01</a>	192.168.1.64	 ethport2



The detected device 'dsldevice' is the SpeedTouch™ itself.

**Configure** The **Configure** page gives you an overview of the devices that are currently connected to the SpeedTouch™ network.

If you want to:

- ▶ Get more information on a specific device, click on the name of the device. See "4.6.2 Device Settings" on page 84 for more information.
- ▶ Edit a device from the **Detected Device(s)** list, click **Edit**.
- ▶ Delete a device from the **Detected Device(s)** list, click **Delete**.



Once a device connects to the SpeedTouch™ network, it will remain listed in the **Detected Device(s)** list until you delete it.

## 4.6.2 Device Settings

Accessing the device settings page

---

Proceed as follows:

- 1 In the **Office Network** menu, click **Devices**.
  - 2 In the **Detected Device(s)** list, click the name of the device you want to view.
- 

Overview

The **Overview** page displays the following items:

- ▶ **Information** allows you to view:
  - ▶ **Status** shows whether the device is currently connected to the SpeedTouch™ network.
  - ▶ **Type** shows the device type.
  - ▶ **Connected To** shows the interface to which the device is currently connected.
- ▶ **Addressing** allows you to view:
  - ▶ **Physical Address** shows the MAC address of the device.
  - ▶ **IP Address Assignment** shows whether the device is using a static or dynamic IP address.
  - ▶ **IP Address** shows the current IP address of the device.
  - ▶ **Always use the same address** indicates whether the wireless client has a static DHCP lease or not.
  - ▶ **DHCP Lease Time** displays the time for which the wireless client can use this IP address.
- ▶ **Connection Sharing:**  
Gives you an overview of the games or services that are currently assigned to this device. Click the name of the game or service to view the used port mappings.  
For more information, see “4.5.4 Game or Application Definition” on page 62.

Configure The **Configure** page allows you to:

- ▶ Change the device information.
- ▶ Allow a game or service running on this device to be initiated from the Internet.



**PC1**

• **Information**

New Name:

Status: Active

Type:

Connected To: ethif1 (Ethernet)

• **Addressing**

Physical Address: 00:01:02:98:1f:df

IP Address Assignment: DHCP

IP Address: 192.168.1.64

Always use the same address:

DHCP Lease Time: 1 day, 0:00:00

• **Connection Sharing**

**Game or Service**

<a href="#">FTP Server</a>	<a href="#">Unassign</a>
<a href="#">HTTP Server (World Wide Web)</a>	<a href="#">Unassign</a>
<input type="text" value="Age of Empires"/>	<input type="button" value="Add"/>

## 4.6.3 Assign Public IP

### Introduction

On this page you can assign the public IP address of your Internet Connection(s) to a specific device on your local network. You might want to do this if:

- ▶ You do not want to use the Network Address Translation engine of your SpeedTouch™.
- ▶ This device is running server applications (Web server,...) and you want it to be accessible from the Internet.



You can also achieve this by creating a port mapping for the specified server, as described in "4.5.2 Game & Application Sharing" on page 59.

- ▶ This device has to be considered as the unique access point to your local network (DMZ).



Be aware that the device to which you assign the public IP address will lose all security offered by the SpeedTouch™.

### Assigning the public IP address to a device

Proceed as follows:

- 1 In the **Office Network** menu, click **Devices**.
- 2 In the **Pick a task** list, click **Assign the public IP address of a connection to a device**.
- 3 Click the **Edit** link of your Internet connection.
- 4 In the **Device** list, select the device you want to assign the public address to.



#### Assign the public IP address of a connection to a LAN device

This page allows you to assign the public IP address of your Internet Connection(s) to a specific device on your local network...

You might want to do this if:

- You encounter issues with some applications through the Network Address Translation engine of your SpeedTouch.
- This device is running server applications (web server, ...) and you want it to be accessible from the internet.
- This device has to be considered as the unique entry to your local network (DMZ).

Internet Service	Device		
Internet	YourLaptop	<a href="#">Apply</a>	<a href="#">Cancel</a>

- 5 Click **Apply**.  
The SpeedTouch™ prompts you to make some adjustments as a result of the new configuration.
- 6 Click **OK**.
- 7 Release and renew the IP address of the device.



For more information, see your operating system's user guide or help.

- 8 If necessary, reassign server applications to this device.



## 4.6.4 Wireless Device Settings

**Availability** This page is only available on SpeedTouch™ devices equipped with a wireless access point.

**Accessing the wireless device settings page**

Proceed as follows:

- 1** In the **Office Network** menu, click **Devices**.
- 2** In the **Detected Device(s)** list, click the name of the wireless device you want to view.

**Overview**

The **Overview** page displays the following items:

- ▶ **Information** allows you to view:
  - ▶ **Status** displays whether the device is currently connected to the SpeedTouch™ network.
  - ▶ **Type** displays the device type.
  - ▶ **Connected To** displays the interface to which the device is currently connected.
  - ▶ **Allowed on LAN** indicates whether the wireless client is allowed to connect to the SpeedTouch™ WLAN.
- ▶ **Addressing** allows you to view:
  - ▶ **Physical Address** displays the MAC address of the device.
  - ▶ **IP Address Assignment** displays whether the device is using a static or dynamic IP address.
  - ▶ **IP Address** displays the current IP address of the device.
  - ▶ **Always use the same address** indicates whether the wireless client has a static DHCP lease or not.
  - ▶ **DHCP Lease Time** displays the time for which the wireless client can use this IP address.
- ▶ **Connection Sharing:**  
Gives you an overview of the games or services that are currently assigned to this device. Click the name of the game or service to view the used port mappings.  
For more information, see “4.5.4 Game or Application Definition” on page 62.

**Configure**

On the **Configure** page you can:

- ▶ Change the device information.
- ▶ Assign a static DHCP server lease to this device by selecting the **Always use the same address** check box.
- ▶ Allow a game or service running on this device to be initiated from the Internet.

## 4.6.5 Access Point Settings

---

**Availability** This page is only available on SpeedTouch™ devices equipped with a wireless access point.

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### Accessing the Access Point settings

Proceed as follows:

- 1** In the left menu, click **Office Network**.
- 2** Under **Wireless**, click the name of the Access Point you want to view or configure.



The Access Point names have the following format: "WLAN: " + Network Name, for example "WLAN: SpeedTouch123456".

---

### Overview

The **Overview** page displays a brief overview of the current configuration.

---

### Details

The **Details** page displays a more detailed overview of the current configuration.

Under Configuration, the following fields are available:

- ▶ **Interface Enabled:**  
Indicates whether the wireless interface is enabled or disabled.
- ▶ **Physical Address:**  
Displays the Base Service Set Identifier (BSSID) of the selected Access Point.
- ▶ **Network Name (SSID):**  
Displays the network name of your WLAN.
- ▶ **Interface Type:**  
Displays one of the following interface types:
  - ▶ 802.11b  
Only stations that are configured in 802.11b mode can associate.
  - ▶ 802.11b(legacy)/g  
This is a special compatibility mode for 802.11b/g and is in fact designed for older types of b-clients. Use this mode if you are experiencing problems with wireless clients that connect to the SpeedTouch™ Access Point.
  - ▶ 802.11b/g  
Only stations that are configured in 802.11b/g mode can associate.
  - ▶ 802.11g  
Only stations that are configured in 802.11g mode can associate.
- ▶ **Actual Speed:**  
Displays the current transmission speed.
- ▶ **Channel Selection:**  
Displays whether you select a fixed channel yourself or the SpeedTouch™ selects a channel for you.
- ▶ **Region:**  
Displays your region.
- ▶ **Channel:**  
Displays the channel that is currently used by the Access Point.

▶ **Allow multicast from Broadband Network:**

Displays whether you to allow/deny multicast messages from the Internet.



Large bandwidth streams, like video streams, have a large impact on your wireless performance.

▶ **WMM:**

Displays whether WMM is enabled or disabled. For more information about WMM, see “ [Access point settings](#)” on page 164.



WMM or Wi-Fi MultiMedia enhances QoS at wireless driver level. It provides a mechanism to prioritise wireless data traffic to and from the associated (WMM capable) stations.

Under **Security** the following fields are available:

▶ **Broadcast Network Name:**

By default the SpeedTouch™ broadcasts its network name, allowing you to easily recognise your wireless network in the list of available networks. Once you have configured your wireless clients, it is recommended to disable this feature by clearing this check box.

▶ **Allow New Devices:**

Allows you to change the access control used by the SpeedTouch™.

▶ **Encryption:**

Allows you to select an encryption level for your wireless network. The following encryption methods are supported by the SpeedTouch™:

- ▶ The Wired Equivalent Protocol ([WEP](#))
- ▶ WPA-Pre Shared Key ([WPA-PSK](#))



The default WEP key and the default WPA key are printed on the SpeedTouch™ bottom label.



Before configuring the SpeedTouch™ encryption, make sure you know which encryption methods are supported by your wireless client.

- ▶ [Wi-Fi Protected Access \(WPA Encryption\)](#)

Configure

On the **Configure** page, you can change the configuration details displayed on the **Details** page.

WEP

The Wired Equivalent Privacy (WEP) algorithm protects wireless communication from eavesdropping.

WEP relies on a secret key that is shared between the wireless client (for example a laptop with a wireless Ethernet card and the SpeedTouch™). The fixed secret key is used to encrypt packets before they are transmitted. Meaning during transmission between client and AP ("in the air") the information in the packets is encrypted.



If your wireless client(s) support(s) WPA-PSK we recommend you to use WPA-PSK, because WEP encryption has been proven to have some security issues.

To enable WEP:

**1** Select **Use WEP Encryption**

**2** In the **WEP Key Length** list, click the desired Data Security level (either 64-bit or 128-bit and Alphanumeric or Hexadecimal).

**3** In the **Encryption key** box, type a Network key of your choice. In case of:

- ▶ **64 bit, Alphanumeric:**

The 40-bit Network key must consist of 5 alphanumeric characters.


- ▶ **64 bit, Hexadecimal:**  
The 40-bit Network key must consist of 10 hexadecimal digits.
  - ▶ **128 bit, Alphanumeric:**  
The 104-bit Network key consists of 13 alphanumeric characters.
  - ▶ **128 bit, Hexadecimal:**  
The 104-bit Network key consists of 26 hexadecimal digits.
- 4 Click **Apply** to immediately apply your changes.
  - 5 Configure your wireless client(s) with the same settings.

## WPA-PSK

The SpeedTouch™ supports WPA-PSK, which offers three advantages over WEP:

- ▶ Authentication via a 4-way handshake to check whether the Pre-Shared Keys (PSKs) are identical.
  - ▶ Stronger encryption types:
    - ▶ Temporal Key Integrity Protocol (TKIP) (default): Instead of using a fixed WEP key, TKIP uses in pairs temporary session keys which are derived from the PSK during the 4-way handshake. For each packet it uses a different key. TKIP also provides a message integrity check (MIC) and a rekeying mechanism (in seconds).
    - ▶ Advanced Encryption Standard (AES): State-of-the-art encryption; can only be used if all wireless devices in your WLAN support AES.
- ▶ Message Integrity Check (MIC). Which is a strong mathematical function in which the recipient and transmitter each compute and compare the MIC. If they don't match it is assumed that a third person has been trying to read the data.

Proceed as follows to enable WPA-PSK:

- 1 Select **Use WPA-PSK Encryption**.
- 2 In the **WPA-PSK Encryption Key** box, type a pass phrase (also known as Pre-shared key) of your choice. The pass phrase must consist of 8 to 63 ASCII characters or 64 HEX digits.
- 3 In the **WPA-PSK Version** list, click the desired WPA-PSK version.
  -  Depending on the WPA-PSK version you choose, one of the following WPA-PSK encryption will be set automatically:
    - ▶ WPA: TKIP
    - ▶ WPA2: AES
    - ▶ WPA+WPA2: TKIP+AES
  - AES is not yet implemented in most clients but it is in the SpeedTouch™ because it will be the future security standard.
- 4 Click **Apply** to immediately apply your changes.
- 5 Configure your wireless client(s) with the same settings.

## WPA Encryption

Proceed as follows to enable WPA Encryption:

- 1 Select **Use WPA Encryption**.
- 2 In the **WPA Radius IP** box, type the WPA Radius IP.
- 3 In the **WPA Radius Port** box, type the WPA Radius Port.
- 4 In the **WPA Radius Key** box, type the WPA Radius Key.

**5** In the **WPA Version** list, click the desired WPA version.



Depending on the WPA version you choose, one of the following WPA encryption will be set automatically:

- ▶ WPA: TKIP
- ▶ WPA2: AES
- ▶ WPA+WPA2: TKIP+AES

**6** Click **Apply** to immediately apply your changes.

**7** Configure your wireless client(s) with the same settings.

#### Access control on the SpeedTouch™

The following modes are available:

- ▶ **New stations are allowed (automatically):**  
All New stations can access the SpeedTouch™ WLAN.
- ▶ **New stations are allowed (via registration):**  
Only allowed stations in the Access Control List (ACL) have access. You can add new stations via registration.  
For more information, see “ [Allowing new wireless](#)” on page 92
- ▶ **New stations are not allowed:**  
Only allowed stations in the Access Control List (ACL) have access.

## Allowing new wireless

If you selected **New stations are allowed (via registration)** or in the **New stations are not allowed** list, wireless clients have to be added manually.

Proceed as follows:

**1** In the **Office Network** menu, click **Devices**.

**2** In the **Pick a task** list, click **Search for wireless devices**.

The SpeedTouch™ searches for new wireless stations that use the encryption key of the SpeedTouch™ Access Point.

The SpeedTouch™ takes you to the **Office Network**. The new station will be shown next to the name of the SpeedTouch™ WLAN.



To view the device settings, click the name of the new station. For more information, see ["4.6.4 Wireless Device Settings"](#) on page 87.

## 4.6.6 Configuring WDS

---

**Availability** This page is only available on SpeedTouch™ devices equipped with a wireless access point.

---

**What is WDS** The **Wireless Distribution System (WDS)** allows you to extend the range of your wireless network by introducing one or more WDS-enabled devices into your wireless network.



You can only establish WDS links with WDS-enabled devices.

---

### Configuring WDS

Proceed as follows to access the WDS pages on the SpeedTouch™:

- 1** In the left menu, click **Office Network**.
- 2** Under **Wireless**, click the Access Point you want to configure for WDS.



The Access Point names have the following format: "WLAN: " + Network Name, for example "WLAN: SpeedTouch123456."

- 3** Click **Configure**.
- 4** In the **Pick a task** list, click **Configure WDS**.

---

### Establishing a WDS connection

Proceed as follows:

- 1** In the **Pick a task** list, click **Scan for wireless Access Points**.  
The SpeedTouch™ warns you that all associated stations will lose connectivity for a few seconds.
- 2** Click **OK**.  
The SpeedTouch™ lists the results in the **Accessible Access Points** table.
- 3** Select the Access Point to which you want to establish a WDS connection.
- 4** Click **Apply**.
- 5** Configure this Access Point with:
  - ▶ The same WEP key if WEP is enabled.
  - ▶ The same **fixed** channel.

## 4.6.7 Interfaces

### Interfaces overview

The **Interfaces** page gives you an overview of the interfaces used on your SpeedTouch™. If you want to know more about the network settings of a specific interface, click the name of the interface you want to view.



### Interfaces

- [LocalNetwork](#)
  - ethport1 (100Mbps)
  - ethport2 (100Mbps)
  - ethport3 (100Mbps)
  - ethport4 (100Mbps)
  - WLAN: SpeedTouch00D961 (54Mbps)



## 4.6.8 Interface Settings

**Overview** The **Overview** page gives you an overview of the current interface settings.



### Interface - LocalNetwork

- Interface Information**

Interface Group: lan

- TCP/IP Configuration**

Auto-IP: Disabled

Use DHCP Server: Enabled

- IP Addresses**

IP Address/Mask	Type
10.0.0.138/24	Static
192.168.1.254/24	Static

- DHCP Pools**

DHCP Pool Name	Address Range	Gateway
LAN_private	192.168.1.64 - 192.168.1.253	192.168.1.254

**Configure** The **Configure** page allows you to:

- ▶ Change the IP address settings of the SpeedTouch™.
- ▶ Change the DHCP IP address pool settings.



Before changing the DHCP pools, make sure that at least one IP address of the SpeedTouch™ uses the same subnet as the IP addresses in the DHCP pools.

Assigning a new IP address to the SpeedTouch™

Under **IP Addresses**, proceed as follows:

- 1 Type the IP address of your choice (for example 192.168.1.1) in the left text box.
- 2 Type subnet mask (for example 255.255.255.0) in the right text box.
- 3 Click **Add**.

Network devices using the same subnet mask can now access the SpeedTouch™ using this IP address.

## 4.6.9 DHCP Pool

DHCP Pool page On the **DHCP Pool** page, you can create/change a DHCP pool.

Accessing the DHCP Pool page

Proceed as follows:

- 1 In the **Office Network** menu, click **Interfaces**.
- 2 Click the name of the interface which DHCP pool settings you want to change.
- 3 Click **Configure**.
- 4 Under **DHCP Pools**, click:
  - ▶ **Add** to add a new DHCP pool.
  - ▶ **Edit** to edit an existing DHCP pool.
  - ▶ **Delete** to delete an existing DHCP pool.



This link will only be shown if there are more than one DHCP pools.

The DHCP Pool page appears.



Your\_DHCP\_pool  
Configure parameters for your DHCP pool.



### • Pool Configuration

Interface:	LocalNetwork
Start Address:	192.168.1.10
End Address:	192.168.1.20
Subnet Mask:	255.255.255.0
Server:	192.168.1.254
Gateway:	192.168.1.254
Primary DNS:	192.168.1.254
Secondary DNS:	0.0.0.0
Primary WINS:	0.0.0.0
Secondary WINS:	0.0.0.0
Lease Time:	Infinite
Always give same address to DHCP clients:	<input checked="" type="checkbox"/>

Apply Cancel

Components of the  
DHCP Pool page

The following settings are available for configuration:

- ▶ **Interface:**  
The SpeedTouch™ interface to which the DHCP pool applies.
- ▶ **Start Address:**  
The start IP address of the DHCP server's address pool.
- ▶ **End Address:**  
The end IP address of the DHCP server's address pool.  
 Both the start and end IP address define the IP address range used by the DHCP server to assign leases.
- ▶ **Subnet Mask:**  
The subnet mask of the DHCP server's address pool.
- ▶ **Server:**  
The SpeedTouch™ IP address used as DHCP server address.
- ▶ **Gateway:**  
The IP address that will be assigned to the DHCP clients as their default gateway.
- ▶ **Primary DNS:**  
The IP address of the primary DNS server.
- ▶ **Secondary DNS:**  
The IP address of the secondary DNS server.
- ▶ **Primary WINS:**  
The IP address of the primary WINS server.
- ▶ **Secondary WINS:**  
The IP address of the secondary WINS server.
- ▶ **Lease Time:**  
The time for which the DHCP client is allowed to use the assigned IP address:  
 If you select **Always give same address to DHCP clients**, the lease time will be automatically set to **Infinite**.
- ▶ **Always give same address to DHCP clients:**  
Select this check box if you always want to use the same IP address for the DHCP clients.



## 5 Expert Configuration

**Introduction** The SpeedTouch™ Expert Mode pages allows for advanced configuration and maintenance of your SpeedTouch™ device.

While the Basic pages are mainly constructed to allow you to overview and diagnose the running product and its configuration, the Expert Mode pages have been designed to allow in-depth configuration of every aspect of your SpeedTouch™.

**Web GUI overview** The following Site Map gives you an overview of all available menus in Expert Mode:

Click ...	To ...
SpeedTouch™	view information on your SpeedTouch™, configure or upgrade it.
IP Router	view/configure the SpeedTouch™ IP interfaces, IP routing table and NAT entries.
Connections	view/configure a broadband connection.
Local Networking	view/configure the SpeedTouch™ DHCP server/client, the DNS configuration, the managed Ethernet switch .
Firewall	view/configure the SpeedTouch™ Firewall.
VPN	configure the SpeedTouch™ for VPN.
SIP PBX	configure the SpeedTouch™ SIP PBX.
Back to Basic Configuration...	switch to the Basic Configuration web interface.

### Expert Mode navigation

The Navigation and notification area displays the current user and the site navigator, as well as notification messages, if applicable.

In addition, following action buttons are always available on every page:

Click ...	To ...
Save All	force a save of the current configuration of your SpeedTouch™.
CLI	access the complete SpeedTouch™ Command Line Interface in a graphical way.
Help	open the SpeedTouch™ help pages.



If available on your SpeedTouch™, you are able to change the language of your SpeedTouch™ web pages via the language action buttons in the top right corner on each of the SpeedTouch™ pages.

## 5.1 Home

---

**Overview** The Expert Mode home page is in fact the same as the SpeedTouch™ home page in Basic Mode; it provides an instant overview of all aspects of your SpeedTouch™ configuration and operational status.

For more information, see [Home](#) (of [Basic Configuration](#) web interface).

## 5.2 SpeedTouch™

Overview The SpeedTouch™ menu consists of the following topics:

Click ...	To ...
Easy Setup	start the embedded Easy Setup wizard.
System Information	view important SpeedTouch™ information.
Connections	start/stop PPP connection sessions.
Diagnostics	view detailed system and configuration information of the SpeedTouch™ and perform IP connectivity checks on WAN connections.
Syslog	view/configure the SpeedTouch™ system logging engine.
System Update	manage various kinds of system configuration files and to perform a system upgrade.
SpeedTouch™ Services	view/configure existing SpeedTouch™ services or to add new ones.
SNTP	view/configure SpeedTouch™'s real-time clock engine.
SLA	access the SpeedTouch™ Service Level Agreement (SLA) facilities.
Add-on	add new or extend existing functionality of your SpeedTouch™ via software key activation.



## 5.2.1 Easy Setup

Introduction Click **Easy Setup** to start the SpeedTouch™ Easy Setup wizard.

The Easy Setup wizard provides an easy way to prepare the SpeedTouch™ for Internet connectivity. Depending on the installed wizard templates (see “[Manage configuration files](#)” on page 111 for more information) you can select from one or more semi-automatic scripts helping you to fully configure most aspects of the SpeedTouch™ with a minimum of effort and risk of wrong or insufficient configurations.



## 5.2.2 System Information

**Overview** The **System Information** page is the SpeedTouch™ expert start page. It consists of four sections:

- ▶ Diagnostics
- ▶ DSL Line Info
- ▶ Configuration
- ▶ System

Diagnostics		DSL Line Info	Configuration	System
Test				Result
System Self Test				✓
LAN				✓
DSL				✓

**Diagnostics** Select **Diagnostics** to view the results of the System Self Test, LAN connectivity and DSL synchronisation test:

If result is ...	Then ...
	the overall status of the particular item is healthy.
	an error situation has been detected for that item.

**DSL Line Info** Select **DSL Line Info** to view the current physical status of the ADSL line.

The DSL Statistics allow you to view:

- ▶ **Line Status:** this shows whether the DSL link is synchronised (Enabled) or not (Initialising).
- ▶ **Bandwidth Up/Down:** the maximum available bandwidth of the DSL link in both up- and downstream direction.
- ▶ **Uptime:** The duration of the current Enabled Line Status.
- ▶ **kBytes Tx/Rx:** the amount of kilobytes (kBytes) sent (Tx) and received (Rx) since the establishment of the DSL link.

In addition, per configured Internet Service interface you can view:

- ▶ The interface's currently assigned or configured local WAN IP address
- ▶ The interface's currently assigned or configured primary (and secondary) DNS server IP address(es)



In case the negotiation of IP addresses failed, **Unassigned** or - is displayed for the applicable interface.

**Configuration** Select **Configuration** to view the configuration currently active on the SpeedTouch™.

See "5.2.6 System Update" on page 110 for more information.

---

System Select **System** to view some important system information of the SpeedTouch™.

The **System** table lists the SpeedTouch™'s:

- ▶ **Product Name**
- ▶ **Physical Address.** This worldwide unique hardware address is also called Medium Access Control (MAC) address.
- ▶ **Software Release**
- ▶ **Board Name**
- ▶ **Serial Number**
- ▶ **Product Code**



Most of the information is also listed on the identification label on the bottom of the SpeedTouch™.

## 5.2.3 Connections

**Overview** The **Connections** page allows you to start and stop PPP connection sessions. All existing PPP connections are listed in the **Connections** table.

If no PPP connections have been defined, this table is empty.

**Connections**

Interface	Destination	Mode	Link	State
Internet	RELAY	always-on	idle	down

**Specify your username and password:**

User:

Password:

Save this password:

**Connections** In the **Connections** table, per interface, following information is provided:

- ▶ **Interface:** the name of the PPP connection interface
- ▶ **Destination:** the name of the ATM interface of the PPP connection
- ▶ **Mode:** the PPP connection mode, being either:
  - ▶ **always-on:** by default the session will always be active
  - ▶ **dial-in:** the session is only activated if you explicitly **Dial-in**
  - ▶ **dial-on-demand:** the session is automatically started as soon as outgoing traffic has been generated
- ▶ **Link:** the actual PPP link status, being either:
  - ▶ **idle:** no PPP link set-up
  - ▶ **connecting:** PPP link set-up pending
  - ▶ **connected:** PPP link set up
  - ▶ empty, in case of an idle, listening PPP connection
- ▶ **State:** the PPP connection interface state, being either:
  - ▶ **up:** WAN connectivity on this interface achieved
  - ▶ **down:** no WAN connectivity achieved (yet)

### Start/stop PPP sessions

To start an idle PPP session:

- 1** Select the applicable PPP connection (with Link **idle**).
- 2** Type/edit the Password for the user name.
- 3** Select whether the password should be saved or not.
- 4** Click **Dial-in** to apply your changes and start the PPP connection session.

To stop an active PPP connection session (with Link **connecting** or **connected**):

- 1** Select the applicable PPP connection.
- 2** Click **Hang-up** to stop the PPP connection session.

## 5.2.4 Diagnostics

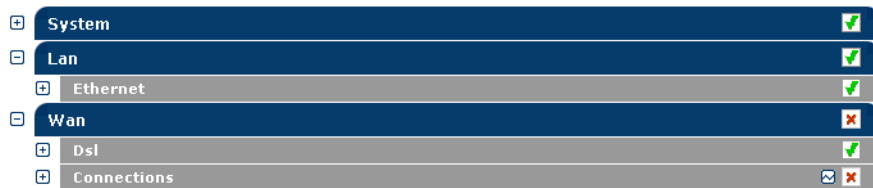
**Overview** The **Diagnostics** page provides in-depth information, counters and statistical data on the SpeedTouch™ system settings, and its LAN and WAN connections.

The diagnostics are broken down into three expandible categories:

- ▶ **System**
- ▶ **LAN**
- ▶ **WAN**

Expand All

Collapse All



IP Connectivity

Refresh

Per category an overall status is displayed:

If the status is ...	Then ...
	the overall status of the particular category is healthy.
	an error situation has been detected for that category.
	the overall status of the category could not be determined.

Following action buttons are provided:

Click ...	To ...
<input type="checkbox"/> <b>Expand All</b>	expand all collapsed categories.
<input type="checkbox"/> <b>Collapse All</b>	collapse all expanded categories.
<input checked="" type="checkbox"/> <b>IP Connectivity</b>	check all connections on IP connectivity.
<input type="checkbox"/> <b>Refresh</b>	refresh all counters and values.
<input type="checkbox"/> next to a category	expand the applicable category.
<input type="checkbox"/> next to a category	collapse the applicable category.

## 5.2.5 Syslog

Overview The **Syslog** page consists of two sections:

- ▶ Messages
- ▶ Configuration

Messages
Configuration

**Message buffer view options:**

Facility:

Severity:

**List of log messages**

Facility	Severity	System UpTime: 00:47:08 (current time) Message Contents
local5	notice	System UpTime: 00:02:51 xDSL linestate up (downstream: 2336 kbit/s, upstream: 544 kbit/s)
auth	notice	System UpTime: 00:01:29 LOGIN User Administrator logged in on [HTTP] (from 192.168.1.10)
security	notice	System UpTime: 00:00:00 FIREWALL level changed to Disabled.

### Messages

This section allows to overview system log and alert messages your SpeedTouch™ generated during operation. System log messages are used to provide a historical overview of events, errors, and messages generated during SpeedTouch™ operation.

Per message following information is shown:

- ▶ Facility
- ▶ Severity
- ▶ The system message content (and time of generation)

By default the table is automatically refreshed every 30 seconds and shows all system log messages.

- ▶ Click **Stop AutoRefresh** to stop the automatic refreshing of the table.

The **Message buffer view options** menu becomes accessible to:

- ▶ Select the **Facility** level of syslog messages to show in the table.
- ▶ Select the **Severity** level of syslog messages to show in the table.
- ▶ Change the **Refresh rate** of the table.

As long as **AutoRefresh** is disabled you can manually refresh the table by clicking **Refresh**.

- ▶ Click **AutoRefresh** to apply your changes and to start automatic update of the table (using the new refresh rate).

### Configuration

This section allows you to view/configure remote destinations (syslog servers) to send (a subset of) the SpeedTouch™ syslog messages for remote monitoring purposes.

To add a destination:

- 1** In the **Facility** box, type the **Facility** of your choice.
- 2** In the **Severity** box, click the **Severity** of your choice.
- 3** In the **Destination** box, type a destination (IP address or host name) to send the messages to.
- 4** Click **Add**.

To change or delete a destination:

- 1 Select the applicable interface
- 2 If needed, make your changes and click:
  - ▶ **New** to add a new destination with the new settings next to the existing one.
  - ▶ **Apply** to apply the changes to the existing destination.
  - ▶ **Delete** to remove the destination from the list of destinations.



Click **Deactivate** to withdraw all forwarding of syslog messages for all destinations; to re-enable forwarding of syslog messages, click **Activate**.

### Facility

Following priority facilities are possible for a syslog message generated by the SpeedTouch™. The facilities are listed by descending priority, each followed by (notation, priority value):

- ▶ Kernel messages (kern, 0)
- ▶ User-level messages (user, 8)
- ▶ Mail system (mail, 16)
- ▶ System daemons (daemon, 24)
- ▶ Authorization messages (auth, 32)
- ▶ Syslog daemon messages (syslog, 40)
- ▶ Line printer subsystem (lpr, 48)
- ▶ Network news subsystem (news, 56)
- ▶ UUCP subsystem (uucp, 64)
- ▶ Clock daemon (cron, 72)
- ▶ Security messages (security, 80)
- ▶ FTP daemon (ftp, 88)
- ▶ NTP subsystem (ntp, 96)
- ▶ Log audit (audit, 104)
- ▶ Log alert (alert, 112)
- ▶ Clock daemon (clock, 120)
- ▶ Local use messages (local0 ... local7, 128 ... 184)

### Severity

Following priority severities are possible for a syslog message generated by the SpeedTouch™ SpeedTouch™. The severities are listed by descending priority, each followed by (notation, priority value):

- ▶ Emergency conditions, system unusable (emerg, 0)
- ▶ Alert conditions, immediate action is needed (alert, 1)
- ▶ Critical conditions (crit, 2)
- ▶ Error conditions (err, 3)
- ▶ Warning conditions (warning, 4)
- ▶ Normal but significant conditions (notice, 5)
- ▶ Informational messages (info, 6)
- ▶ Debug-level messages (debug, 7)

## 5.2.6 System Update

Overview The **System Update** page features all means for management and maintenance of your SpeedTouch™. It consists of two sections:

- ▶ System configuration
- ▶ System Upgrade

System Configuration System Upgrade

Upload File Configuration Files Language Packs

Specify a file to upload:

Browse...

Upload

System configuration The **System Configuration** section allows you to manage locally stored system files. Select:

- ▶ **Upload File** to upload a system file to the SpeedTouch™. See "Upload system files" on page 110 for more information.
- ▶ **Configuration Files** to manage stored configuration files. See "Manage configuration files" on page 111 for more information.
- ▶ **Language Packs** to manage stored SpeedTouch™ web interface language packs. See "Manage language packs" on page 111 for more information.

Upload system files Following file types are allowed:

- ▶ **.ini**  
Files with extension *ini* are SpeedTouch™ configuration files. These files are intended for backing up configurations (to back up your current configuration, see "4.3.5 Back up & Restore" on page 48).
- ▶ **.tpl**  
Files with extension *tpl* are configuration templates, used by the SpeedTouch™ Home Install Wizard, available on the SpeedTouch™ Setup CD, or the embedded **Easy Setup** wizard.
- ▶ **.Ing**  
Files with extension *Ing* are language packs for your SpeedTouch™. These files allow you to select the language in which the SpeedTouch™ web interface is presented.



You can only upload files with known extensions; however this does not guarantee the validity of a system file. Only upload files if these are:

- ▶ configuration files (.ini) you backed up yourself from this SpeedTouch™.
- ▶ template files (.tpl) that are known to be valid for your SpeedTouch™ (e.g. stemming from the SpeedTouch™ Setup CD delivered with your SpeedTouch™).
- ▶ language packs (.Ing) that match your SpeedTouch™'s Board name and Software release.



To upload system files:

- 1** Click **Browse** to specify the file on your local drive you wish to upload.
- 2** Click **Upload** to upload the system file to your SpeedTouch™.



Each file requires an amount of memory. Make sure to limit the number of files to the minimum.

### Manage configuration files

This table allows you to view configuration files that are currently stored on your SpeedTouch™.

Following configuration files are listed:

- ▶ **Active Configuration;** showing details on the configuration that is currently running on your SpeedTouch™.
- ▶ **Backup Configuration;** listing configuration backups stored on your SpeedTouch™.
- ▶ **Wizard template,** listing configuration wizard templates that are currently available for the embedded [Easy Setup](#).

To view the configuration of, backup, or delete a configuration file:

- 1** Select the configuration file. A **Details** pane shows some extra information on the selected configuration file.
- 2** Click:

- ▶ **Backup** to store the file on a location on your local disk.
- ▶ **Delete** to remove the file from your SpeedTouch™.



Some configuration files may be required for the SpeedTouch™'s system integrity. These files are protected and cannot be deleted from your SpeedTouch™.

- ▶ **Cancel** to return to the configuration file overview.

### Manage language packs

Your SpeedTouch™ is able to display its web interface, embedded [Easy Setup](#) and this Help in various languages.



Use the Language bar to change the language in which the SpeedTouch™ web interface, Easy Setup and this Help is displayed. For more information, see "[4.1.2 Language Bar](#)" on page 38.



Although all language pack files stored on your SpeedTouch™ are listed, only language pack files that match with the board name and the software version of your SpeedTouch™ can be actually used. (See "[System](#)" on page 105 for more information to identify your SpeedTouch™).

## System Upgrade

The **System Upgrade** section allows you to manage your SpeedTouch™'s system software and upload or apply a new system software.

For extended management reasons and roll-back scenarios your SpeedTouch™ provides storage room for two system software packages: the active system software the SpeedTouch™ is currently running and the passive one.

- ▶ The **System software properties** table provides information on the active software:
- ▶ A **link** is provided to check for the latest available system software (based on the information provided in the **System software properties** table and your SpeedTouch™'s serial number.
- ▶ The **Software Versions** table allows you to overview the currently stored active and passive system software and to:
  - ▶ Upload system software.
  - ▶ Switch to another system software version.

## Upload system software

Proceed as follows:

- 1 Make sure you have a valid system software for your SpeedTouch™ readily available on your local disk.



Use the link provided to check for the latest available system software.

- 2 If a **Passive system software version** is listed, click **Remove Passive** to remove it from the SpeedTouch™ storage.
- 3 Click **Browse...** to specify the system software file on your local drive you wish to upload.
- 4 Click **Upload** to upload the system software to your SpeedTouch™.



Uploading system software may take a few minutes. Meanwhile do not browse to another SpeedTouch™ page in order not to interrupt the upload process.

If the upload was successful the uploaded system software will be listed as **Passive system software version**.

## Switch to another system software version

To upgrade your SpeedTouch™ system software to a new version, or in some cases roll-back to a previous version:

- 1 Make sure that a Passive system software is correctly uploaded to your SpeedTouch™ (it should be listed in the **Software Versions** table).
- 2 Click **Switch Over** to restart the SpeedTouch™ and activate the passive system software version as active version.



Switching the system software versions may take a few minutes. Do not power off your SpeedTouch™, or interrupt the switch process in any other way.

During restart, the SpeedTouch™ will switch the passive and active system software; the previous active system software will be stored as passive system software version.



If for any reason the switch-over failed, the system software version that was running as active software version will be retained. To ensure correct operation of the SpeedTouch™ after recovery, the previous passive system software may need to be removed; instead the active system software will be duplicated as passive system software version.

## 5.2.7 SpeedTouch™ Services

**Overview** The SpeedTouch™ **Services** page allows you to view and configure all services that are currently configured on your SpeedTouch™. The purpose of this page is to centralise the management of all SpeedTouch™ embedded Services and Applications, or otherwise stated, all internal modules and engines of the SpeedTouch™ that accept, relay or initiate IP traffic.

The SpeedTouch™ **Service** table provides an overview of registered services and some additional information.

### SpeedTouch Services

Services	Type	Protocol	SourceIP	Ext.Port	Int.Port	Interface	RemoteIP
<input type="checkbox"/> PPTP VPN	group		auto	-	any	any	any
<input checked="" type="checkbox"/> DNS Client	client	udp	auto	-	53	any	any
<input type="checkbox"/> Simple Network Tim...	client	udp	auto	-	123	any	any
<input checked="" type="checkbox"/> Ping using ICMP fo...	client	icmp	auto	-	8	any	any
<input checked="" type="checkbox"/> Ping using UDP for...	client	udp	auto	-	7	any	any
<input checked="" type="checkbox"/> TraceRoute using I...	client	icmp	auto	-	8	any	any
<input checked="" type="checkbox"/> TraceRoute using U...	client	udp	auto	-	33434	any	any
<input checked="" type="checkbox"/> System Logging Eve...	client	udp	auto	-	514	any	any
<input checked="" type="checkbox"/> HTTP web server	server	tcp	-	80	80	lan	any
<input checked="" type="checkbox"/> HTTP web server ov...	server	tcp	-	443	443	lan	any
<input type="checkbox"/> HTTP intercept proxy	proxy	tcp	auto	80:lan1,...	8080	any	any
<input checked="" type="checkbox"/> File Transfer	server	tcp	-	21	21	lan	any
<input checked="" type="checkbox"/> Virtual Terminal	server	tcp	-	23	23	lan	any
<input type="checkbox"/> Routing Informatio...	peer	udp	auto	520	520	any	any
<input type="checkbox"/> Handles the rip qu...	server	udp	-	520	520	any	any
<input checked="" type="checkbox"/> DNS Server	relay	udp	auto	53	53	lan	any
<input checked="" type="checkbox"/> Dynamic DNS	group		auto	-	any	any	any
<input type="checkbox"/> DHCP Server	server	udp	-	49152	49152	any	any
<input type="checkbox"/> Rx snmp GET, SET a...	server	udp	-	161	161	lan	any
<input type="checkbox"/> Send snmp traps to...	client	udp	auto	-	any	any	any
<input checked="" type="checkbox"/> Simple Service Dis...	server	udp	auto	1900	1900	any	any
<input checked="" type="checkbox"/> Setup and upgrade ...	server	udp	auto	3235	3235	any	any
<input type="checkbox"/> CPE Wan Management...	client	tcp	auto	-	any	any	any
<input type="checkbox"/> CPE Wan Management...	server	tcp	-	51005	51005	any	any
<input checked="" type="checkbox"/> IP connectivity co...	group		auto	-	any	any	any
<input checked="" type="checkbox"/> ICMP echo responder	server	icmp	-	8	8	lan	any

Select an entry to change its configuration.

Optionally you can click:

- ▶ **Show/Hide Dynamic SpeedTouch™ services** to show/hide SpeedTouch™ services that have been dynamically created by the SpeedTouch™.
- ▶ **Show/Hide members of service groups** to show/hide all the individual SpeedTouch™ services that are member of a SpeedTouch™ service Group.

Select a service to:

- ▶ **View detailed SpeedTouch™ service information.**
- ▶ [Edit SpeedTouch™ service properties.](#)



Generally it is advised not to alter any of the settings of a SpeedTouch™ service.

## Edit SpeedTouch™ service properties

Editing SpeedTouch™ services might be useful in cases where you want to hide/protect the service by deviation from the typical service settings or restricting access from/to interfaces. However;



Do not edit SpeedTouch™ system services unless specifically needed.

To edit a SpeedTouch™ system service:

- 1** Select the service.
- 2** In **Service properties**:
  - ▶ Select or clear **Service enabled** to respectively enable or disable the service.
  - ▶ Depending on the service, either:
    - ▶ Select a **Source IP interface**.
    - ▶ Type a new **Internal TCP/UDP port**.
- 3** In **External TCP/UDP Port**, optionally:
  - ▶ Clear existing **External TCP/UDP ports**, if applicable.
  - ▶ Type the port number of an additional external TCP/UDP port to add.
- 4** In **Allow service via (Interface)**, optionally:
  - ▶ Clear existing interfaces, if applicable.
  - ▶ Type the name of the additional interface.
- 5** In **Accept service from (Remote IP)**, optionally:
  - ▶ Clear existing remote IP addresses, if applicable.
  - ▶ Type the IP address of the specific remote IP host.
- 6** Click **Apply** to apply your changes to the SpeedTouch™ service.



You must repeat the procedure for each individual External TCP/UDP port, interface, or remote IP address you want to add.

SpeedTouch™ service types

The SpeedTouch™ service can be of following type:

Type	Indicates a SpeedTouch™ service that...
Client	is the originator of an IP connection (source IP packets).
Server	is the responder of an IP connection (listening to IP packets).
Peer	can be an originator or a responder of an IP connection.
Proxy	is a responder on the LAN side and originator on the WAN side of the SpeedTouch™.
Relay	is a responder on one side (LAN or WAN) and re-originates on the other side (WAN resp. LAN) of the SpeedTouch™.
Group	is an assembly of SpeedTouch™ services. Editing such kind of entries will edit all members of that Group.
Transparent-Map	uses transparent NAT port mappings.
Dynamic	has been dynamically created or enabled by the SpeedTouch™ service manager.
Sibling	the service is member of a SpeedTouch™ Group service.
Shared	uses a protocol port as another existing SpeedTouch™ service.

## 5.2.8 SNTP

**Overview** The Simple Network Time Protocol (SNTP) web page allows you to configure the SpeedTouch™ real-time clock.

The screenshot shows the SNTP configuration interface. At the top, there are tabs for 'SNTP' and 'Manual'. Below them is a table with three columns: 'Name / IP Address', 'Version', and 'Status'. The table is currently empty. Below the table, there is a message: 'Click 'Apply' to commit changes.' Underneath, there is a section titled 'SNTP properties:' with two input fields: 'Name / IP Address' and 'Version'. The 'Version' field is set to '3'. At the bottom right, there are three buttons: 'Apply', 'Clear', and 'Cancel'.

The page contains two sections:

- ▶ **SNTP Client**
- ▶ **Manual**



Selecting **Manual** *immediately disables* the SpeedTouch™ SNTP client. As a consequence the SpeedTouch™ real-time clock will no longer be periodically synchronised with an Internet time server.

### SNTP Client

As long as the SNTP section is selected, automatic time synchronisation of the SpeedTouch™ real-time clock by means of the SpeedTouch™ SNTP client is guaranteed (given that NTP servers are configured of course).

The **SNTP** table allows you to overview and add/delete NTP servers (present on the Internet or your local network) to which the SpeedTouch™ real-time clock is able to synchronize its time settings with.

To add an NTP server:

- 1** Click **New** (if an entry is currently selected, click **Cancel** first)
- 2** Type the host name or IP address of the NTP server.



You can check the Internet for free accessible real-time NTP servers.

- 3** Select the NTP version (1, 2, 3, or 4). This information is most likely provided with the NTP server's IP address.
- 4** Click **Apply**.

You can add multiple NTP servers. This ensures that the SpeedTouch™ SNTP client will always be able to contact at least one NTP server to synchronize the SpeedTouch™ real-time clock with.

### Manual

You can manually configure the SpeedTouch™'s real-time clock in case no connection to an NTP server is available.

To manually configure the SpeedTouch™ real-time clock:

- 1** Type the current **Date** (day/month/year)
- 2** Type the current **Time** (hours:minutes:seconds in 24-hour clock)
- 3** Select the **Time Zone** suiting your physical regional location.
- 4** Select **Daylight saving** to adjust the SpeedTouch™ real-time clock to daylight saving time, if used in your region.
- 5** Click **Apply** to apply the time settings to the SpeedTouch™ real-time clock.

## 5.2.9 SLA

**Overview** The **Service Level Agreement (SLA)** page allows you to view and configure ping and traceroute tests.

Test	Owner	Target Address	Status
-	-	-	-

Specify following properties and click 'Apply' to commit.

**New test:**

Test:

Target address:

Apply Cancel Clear

The page contains two sections:

- ▶ Select **Ping** to view/configure and perform ping tests.
- ▶ Select **Traceroute** to view/configure and perform traceroute tests.

**Ping** The **Ping** table provides a list of configured ping test entries.

By default no ping tests are configured. To add a ping test see [Add/delete a ping test](#).

Select a ping test entry to:

- ▶ [Modify ping test properties](#).
- ▶ Perform a ping test and view test results and history (see [Ping tests and results](#)).
- ▶ Delete the entry (see [Add/delete a ping test](#)).

### Add/delete a ping test

To add a ping test entry:

- 1** Click **New** (if an entry is currently selected, click **Cancel** first).
- 2** Type a name for the ping test entry.
- 3** Type the host name or IP address of the target to ping.
- 4** Click **Apply**.

To delete a ping test:

- 1** Select the ping test entry to delete.
- 2** Click **Delete**.

### Modifying test properties

To modify a ping test entry:

- 1** Select the ping test entry.
- 2** Click **Modify**.
- 3** Make your changes.
- 4** Click **Apply** to apply your changes to the ping test entry.

## Ping tests and results

To start/stop a ping test:

- 1 Select the ping test entry.
- 2 Click:
  - ▶ **Activate** to start the ping test.
  - ▶ **Deactivate** a ping test that is currently running.

To view the results of the ping test:

- 1 Select the ping test entry, if needed.
- 2 Click **Result**.

Ping
Traceroute

Test	Owner	Target Address	Status
▶ PingSpeedTouch	modem	192.168.1.254	Stopped
■ PingMyPC	modem	192.168.1.10	Stopped

Modify
Delete
Cancel
History
Activate

**Result:**

Status:	<input type="text" value="Stopped"/>
Target IP address:	<input type="text"/>
Min RTT [us]:	<input type="text" value="509"/>
Max RTT [us]:	<input type="text" value="509"/>
Avg RTT [us]:	<input type="text" value="509"/>
Probe responses:	<input type="text" value="1"/>
Sent probes:	<input type="text" value="1"/>
RttSumOfSquares [ms]:	<input type="text" value="0"/>
Last good probe:	<input type="text" value="01/01/70 01:11:00.917541"/>

To overview a history of ping tests:

- 1 Select the ping test entry.
- 2 Click **History**.

## Traceroute

The **Traceroute** table provides a list of configured traceroute test entries.

By default no traceroute tests are configured. To add a traceroute test see [Add/delete a traceroute test](#) below.

Per traceroute test entry following information is shown in the table:

- ▶ an intuitive **Test** name of the traceroute Test
- ▶ the traceroute test entry **Owner**
- ▶ the traceroute **Target Address** (host or IP address)
- ▶ the traceroute test **Status**, being either:
  - ▶ Stopped
  - ▶ In Progress

Select a traceroute test entry to:

- ▶ [Modify traceroute test properties](#).
- ▶ Perform a traceroute test and view test results and history (see [traceroute tests and results](#)).
- ▶ Delete the entry (see [Add/delete a traceroute test](#)).



Add/delete a traceroute test

To add a traceroute test entry:

- 1 Click **New** (if an entry is currently selected, click **Cancel** first).
- 2 Type a name for the traceroute test entry.
- 3 Type the host name or IP address of the target to traceroute.
- 4 Click **Apply**.

To delete a traceroute test:

- 1 Select the traceroute test entry to delete.
- 2 Click **Delete**.

Modify traceroute test properties

To modify a traceroute test entry:

- 1 Select the traceroute test entry.
- 2 Click **Modify**.

Test	Owner	Target Address	Status
BRAS	modem	10.50.1.20	Stopped

Modify Delete Cancel History Hop Activate

**Result:**

Status:

Target IP address:

Current hop count:

Current probe count:

Test attempts:

Test Successes:

Last good path:

- 3 Make your changes.
- 4 Click **Apply** to apply your changes to the traceroute test entry.

traceroute tests and results

To start/stop a traceroute test:

- 1 Select the traceroute test entry.
- 2 Click:
  - ▶ **Activate** to start the traceroute test.
  - ▶ **Deactivate** a traceroute test that is currently running.

To view the results of the traceroute test:

- 1 Select the traceroute test entry, if needed.
- 2 Click **Result**.

To overview a history of traceroute tests:

- 1 Select the traceroute test entry.
- 2 Click **History**.

To view a list of hops that have been reached by the traceroute request:

- 1 Select the traceroute test entry.
- 2 Click **Hop**.

## 5.2.10 Add-on

**Overview** Some of the SpeedTouch™'s extended functionalities require a software activation key to enable the corresponding software module.

To acquire a software activation key for activating a SpeedTouch™ software module, proceed as follows:

- 1** Click the name of the software module you intend to activate. This link will forward you to the SpeedTouch™ software activation key web server.
- 2** Follow the instructions for generating and downloading the software activation key.
- 3** If required, paste the obtained software key in the Software Activation Code Input display box.
- 4** Click **Add** to process the software activation key.
- 5** Click **Restart** to restart the SpeedTouch™. This allows the SpeedTouch™ system software to validate the software activation key and to activate the corresponding module.



**Important:** The key is unique for each module and for each SpeedTouch™ device. It can not be re-used for activating another software module, or be copied from or to another SpeedTouch™ device.

Once activated, the software key can not be disabled anymore via the Add-on web page.

For more information, refer to “6 Software Keys” on page 185.

## 5.3 IP Router

Overview The **IP Router** menu consists of the following topics:

Click ...	To ...
IP Addresses	view/configure the IP addresses assigned to any of the SpeedTouch™ interfaces.
Expressions	view/configure interface, or IP, or Service related expressions.
Classification	view/configure packet classification and handling.
IP Routing	view/configure the SpeedTouch™ IP forwarding and routing table.
RIP	view/configure the SpeedTouch™ Routing Information Protocol (RIP) engine.
NAT	view/configure the SpeedTouch™ Address Translation information base.
IP QoS	view/configure the SpeedTouch™ IP Quality of Service (IPQoS) engine.

## 5.3.1 IP Addresses

**Overview** The **IP address table** shows all IP addresses configured on any of SpeedTouch™'s interfaces.

In the table following information is provided per IP address:

- ▶ The **Interface** to which the IP address applies
- ▶ The **IP address/Netmask** (in prefix notation)
- ▶ The IP address **Type**, being either:
  - ▶ **auto**, in case the address has been automatically assigned by the SpeedTouch™ at startup or via negotiation
  - ▶ **extra**, in case of a manually configured IP address.
- ▶ You can also assign additional new IP addresses to the SpeedTouch™ (see [Add/change an IP address](#)).

In case you select an IP address entry, you can:

- ▶ Make changes to the IP address configuration (see [Add/change an IP address](#)) and click **Apply**.
- ▶ Click **Delete** to delete the IP address.

### Add/change an IP address

To add a new IP address to the SpeedTouch™:

- 1** Click **New**.
- 2** Select the **Interface** to which the IP address must apply.

#### IP address table

Interface	Address/Netmask	Type
▶ guest1	192.168.3.254/24	Extra
▶ dmz1	192.168.2.254/24	Extra
▶ lan1	10.0.0.138/24	Extra
▶ lan1	192.168.1.254/24	Extra
loop	127.0.0.1/32	Auto
■ -	-	-

Click "Apply" to commit changes.

#### IP address properties:

Interface:

Address/mask:

Obtain an IP address automatically:

Apply Clear Cancel

- 3** Either:
  - ▶ Type a valid **IP address/mask** (in prefix notation).
  - ▶ Select **Obtain an IP address automatically**.
- 4** Click **Apply** to add the IP address.

To change the configuration of an existing IP address:

- 1** Select the IP address entry.
- 2** Make your changes.
- 3** Click **Apply**.

## 5.3.2 Expressions


**Overview** Expressions are used in rules for source and destination interface, source and destination IP address(es) (ranges) and services.

The Expressions page consists of three sections:

- ▶ Interface
- ▶ IP
- ▶ Service


Interface IP Service		
Expression		Summary
⊕ DHCP-S_if_0		intf=lan1 [...]
⊕ DHCP-R_if_0		intf=guest1 [...]
⊕ wan		intfgroup=0
⊕ local		intfgroup=1
⊕ lan		intfgroup=2
⊕ tunnel		intfgroup=3
⊕ dmz		intfgroup=4
⊕ guest		intfgroup=5
⊕ _Internet		intf=Internet
⊕ _lan1		intf=lan1
⊕ _wan1		intf=wan1
⊕ _dmz1		intf=dmz1
⊕ _guest1		intf=guest1
⊕ HTTP_if_0		intfgroup=2
⊕ HTTPS_if_0		intfgroup=2
⊕ FTP_if_0		intfgroup=2
⊕ TELNET_if_0		intfgroup=2
⊕ DNS-S_if_0		intfgroup=2
⊕ SNMP_AGENT_if_0		intfgroup=2
⊕ PING_RESPONDER_if_0		intfgroup=2
⊕ HTTP1_if_0		intf=lan1 [...]

Click 'New' to create a new entry.

 Expressions are also used by the SpeedTouch™ Stateful Inspection Firewall.

**Interface** The **Interface** section bundles all expressions that express a relation based on Interfaces.

The Expressions table provides following information per expression:

- ▶ The Name of the expression
- ▶ A Summary of the expression's configuration
- ▶ For more detailed information you can expand the expression (click ).

### Adding an interface related expression


To add a new interface related expression:

- 1** Click **New**.
- 2** In the **Interface Expressions Properties** table:
  - ▶ Type a **Name** for the expression.
  - ▶ Select the **Interface group** the expression should relate to. For negative logic, select **Not**.
  - ▶ Select the **interface** the expression should relate to. An interface is the connection between the SpeedTouch™ and one of his attached networks. For negative logic, select **Not**.
- 3** Click **Apply**.

---

**IP** The **IP** section bundles all expressions that express a relation based on IP addresses.


The **Expressions** table provides following information per expression:

- ▶ The Name of the expression
- ▶ A Summary of the expression's configuration.
- ▶ For more detailed information you can expand the expression (click ).

Adding an IP related expression

---


To add a new IP related expression:

- 1** Click **New**.
- 2** In the **IP Expressions Properties** table:
  - ▶ Type a **Name** for the expression.
  - ▶ Type an **IP address** or an IP address range. For negative logic, select **Not**.  
 You can define a valid IP address range by:
    - ▶ Typing a subnet, e.g. 10.0.0.0/8
    - ▶ Typing a IP address subset range, e.g. 10.[1-31].[9-11].[1-5]
    - ▶ Using wild cards, e.g. 192.5.\*.\*
- 3** Click **Apply** to add the expression to the table.

---

**Service** The **Service** section bundles all expressions that express a relation based on services.

The **Expressions** table provides following information per expression:

- ▶ The Name of the expression
- ▶ A Summary of the expression's configuration.
- ▶ For more detailed information you can expand the expression (click ).

Adding a service related expression

---

To add a new service related expression:

- 1** Click **New**.
- 2** In the **Service Expressions Properties** table:
  - ▶ Type a **Name** for the expression.
  - ▶ Select a **Protocol** to filter on. For negative logic, select **Not**.
  - ▶ Type a **Source port from... to...** to define the source port range. For negative logic, select **Not**.
  - ▶ Type a **Destination port from... to...** to define the destination port range. For negative logic, select **Not**.
- 3** Click **Apply** to add the expression to the table.

### 5.3.3 Classification

Overview The **Classification** page consists of three section:

- ▶ **Labels**, providing a list of existing packet classification labels and abilities to add/modify or delete packet classification label entries.
- ▶ **Routing Rules** allow you to associate a routing label (used in **IP Routing**) to a data flow by means of classification rules.
- ▶ **IPOoS Rules** allow you to associate an **IP QoS** label (used in **IP QoS**) to a data flow by means of classification rules.

Labels The **Labels** section provides an overview of existing packet-classification labels.

Labels Routing Rules IP QoS Rules					
	Name	Classification	Class	TCP Ack Class	TOS Marking
▶	DSCP	overwrite	dscp	defclass	disabled
▶	Games	increase	10	10	disabled
▶	Interactive	increase	8	8	disabled
▶	Management	increase	12	12	disabled
▶	Video	increase	10	10	disabled
▶	VoIP	overwrite	14	14	disabled
▶	default	increase	default	prioritize	disabled

Click 'New' to create a new entry.

The Labels table provides following information per label:

- ▶ the packet-classification label **Name**
- ▶ the kind of packet **Classification**
- ▶ the **Class** of classification
- ▶ the **TCP Ack class**
- ▶ whether **TOS Marking** is enabled or disabled.

Proceed as follows to create a new label:

- 1** Click **New** to add a label.
- 2** Fill in all the fields.
- 3** Click **Apply**.

---

## Routing Rules

The **Routing Rules** section provides an overview of the existing routing rules.

Proceed as follows to create a new rule:

- 1** Click **New** to create a new rule.
- 2** Fill in all the fields.
  - ▶ **Index:**  
The index of the label rule.
  - ▶ **Name:**  
The name of the rule.
  - ▶ **Label:**  
The label allows to identify packets with matching criteria. If such a packet arrives it is "labelled" with a packet classification label. Still no packet classified routing is done. Only if you add a route that uses that particular label as route criterion, the effective classification based routing is applied.
  - ▶ **Service:**  
The service or protocol. (e.g. smtp, http, telnet,...)
  - ▶ **Source Interface:**  
The source interface. (e.g. \_lan1, \_wan1, \_dmz1,...)
  - ▶ **Source IP - Select:**  
The name of the source IP expression.
  - ▶ **Destination IP - Select:**  
The name of the destination IP expression.
  - ▶ **State:**  
Select this check box to enable this rule.
  - ▶ **Log:**  
Select this check box to generate a syslog message when this label is being used.
- 3** Click **Apply**.

---

## IP QoS Rules

The **IP QoS Rules** section provides an overview of the existing routing rules.

Proceed as follows to create a new rule:

- 1** Click **New** to create a new rule.
- 2** Fill in all the fields.
- 3** Click **Apply**.



## 5.3.4 IP Routing

### Overview

The **IP Routing** table presents the current content of the SpeedTouch™ Routing Information Base. It contains all routes to all possible destinations and is consulted by the SpeedTouch™ any time prior to sending or forwarding any packets.

#### IP route table

	Destination	Label	Gateway	Interface	Metric
▶	255.255.255.255/32	-	127.0.0.1	loop	0
▶	192.168.1.254/32	-	127.0.0.1	loop	0
▶	10.0.0.138/32	-	127.0.0.1	loop	0
▶	192.168.2.254/32	-	127.0.0.1	loop	0
■	192.168.3.254/32	-	127.0.0.1	loop	0
▶	127.0.0.1/32	-	127.0.0.1	loop	0
▶	192.168.3.0/24	-	192.168.3.254	guest1	0
▶	192.168.2.0/24	-	192.168.2.254	dmz1	0
▶	192.168.1.0/24	-	192.168.1.254	lan1	0
▶	10.0.0.0/24	-	10.0.0.138	lan1	0
▶	224.0.0.0/4	-	192.168.1.254*	lan1	0

Use the input fields below to change the selected entry:  
Click 'Apply' to commit changes. Click 'Delete' to remove the selected entry.

#### IP routing properties:

Destination:

Label:

Gateway:

Interface:

Metric:

Apply Delete Cancel

Similar to the IP address table, a number of IP Routes are pre-configured. Other routes are either added via adding an IP address manually, or via the address negotiation of a Packet Service connection session, e.g. for Routed PPPoA's or Routed PPPoE's IPCP, via the DHCP client, e.g. for Routed Ethernet (MER), via pre-configuration, for example for Routed IPoA, or by the Routing Information Protocol.

### Adding an IP route

To add an IP route:

- 1 Click **New** in the bottom row of the table
- 2 Specify the **Destination** IP prefix
- 3 If needed, select a packet-classification routing **Label** (in case the route applies for classified packets)
- 4 Either specify the IP address of a directly connected **Gateway** OR select the **Interface** to which the route should apply (mutually exclusive).
- 5 Click **Apply**.

### Deleting an IP route

To delete an IP route:

- 1 Select the IP route you want to delete
- 2 Click **Delete**.



An IP prefix is the combination of an IP address and (sub)net mask and e.g. 192.6.11.150/24.

## 5.3.5 RIP

Overview The RIP web page contains three tabs:

- ▶ Configuration
- ▶ Interfaces
- ▶ Neighbours

**Configuration** Interfaces Neighbours

**RIP settings details:**

RIP status:	<input type="checkbox"/>
RIP version:	RIP V2
Default metric:	1
Update time ([1..3600] seconds):	30
Timeout time ([1..3600] seconds):	180
Garbage time ([1..3600] seconds):	120

Apply

Configuration The **Configuration** section allows you to enable/disable the SpeedTouch™ RIP functionality and configure the some basic RIP settings.

Interfaces The RIP **Interfaces** table allows you to configure interface specific RIP settings such as:

- ▶ Override the master RIP status (enable/disable)
- ▶ Override the master RIP version, separately for receiving and sending RIP messages
- ▶ Specify whether authorization is needed or not, and if so the required authorization string
- ▶ Specify whether routed must be included in RIP updates sent to a gateway from which the updates were learned
- ▶ Specify whether the interface should transmit RIP updates or not.

Neighbours Optionally, the RIP **Neighbours** table allows you to define one or more RIP neighbours. This may be necessary in cases where multicast messages can not be sent or received among the network.

## 5.3.6 NAT

Overview The **NAT** menu consists of following sections:

- ▶ Interfaces
- ▶ Mappings
- ▶ Templates

Interfaces The **Interface** page allows you to enable/disable NATP on a specific interface.

Interfaces   Mappings   Templates				
Interface		Group	NAPT	State
<input type="checkbox"/>	loop	local	Disabled	[UP]
<input checked="" type="checkbox"/>	Internet	wan	Enabled	DOWN
<input type="checkbox"/>	lan1	lan	Disabled	[UP]
<input checked="" type="checkbox"/>	wan1	wan	Enabled	BOOT
<input type="checkbox"/>	dmz1	dmz	Disabled	[UP]
<input type="checkbox"/>	guest1	guest	Disabled	[UP]

Proceed as follows to enable/disable an interface:

- 1 Select the interface that has to be enabled/disabled
- 2 Click **Save All** to make the settings permanent.

Mappings The **Mappings** page allows you to map one or more private IP addresses into one or more public IP address on a specific interface.

Depending on your needs following fields are available:

- ▶ **Interface:**  
The name of the IP interface that needs to be NAT-ed.
- ▶ **Protocol:**  
The IP protocol on which address translation has to be applied. This allows the SpeedTouch™ to link specific traffic (protocol dependent) to a chosen private host.
- ▶ **Outside address:**  
The outside (typically public) IP address(es).
- ▶ **Inside address:**  
The inside (typically private) IP address(es).
- ▶ **Access list:**  
You can use the access list to define the address(es) that are allowed to use the outbound connections.
- ▶ **Foreign address:**  
Foreign address is to define the address(es) that are allowed to use the inbound connections.
- ▶ **Flags**
- ▶ **Description**



If you selected NATP, you will have to specify a port range for the inside and outside address.

---

### Creating a NAT mapping

Proceed as follows to create a address translation mapping:

- 1 Click **New** to create a new map.
  - 2 Select or fill in all the fields (see above).
  - 3 Click **Apply**.
- 

### Templates

The Template page allows you to create a NA(P)T template.

Depending on your needs following fields are available:

- ▶ **Interface:**  
The name of the IP interface that needs to be NAT-ed.
- ▶ **Group:**  
The IP interface group scope for this template.
- ▶ **Type:**  
Allows you to choose the translation type.
- ▶ **Protocol:**  
The IP protocol on which address translation has to be applied. This allows the SpeedTouch™ to link specific traffic (protocol dependent) to a chosen private host.
- ▶ **Outside address:**  
The outside (typically public) IP address(es).
- ▶ **Inside address:**  
The inside (typically private) IP address(es).
- ▶ **Access list:**  
You can use the access list to define the address(es) that are allowed to use the outbound connections.
- ▶ **Foreign address:**  
Foreign address is to define the address (es) that are allowed to use the inbound connections.
- ▶ **Flags**
- ▶ **Description**



If you selected NAT, you will have to specify a port range for the inside and outside address.

---

### Creating a NAT template

Proceed as follows to create a template:

- 1 Click **New** to create a new template.
- 2 Select or fill in all the fields (see above).
- 3 Click **Apply**.

### 5.3.7 IP QoS

**Definition**

Quality of Service is the ability for an application to obtain the network service it requires for successful operation. Nowadays the total amount of data traffic increases, while new types of data emerge, like: voice data, video data, audio data. These new types of data pose new requirements for data transport, e.g. low latency, low data loss, ... To meet these requirements, the entire network must ensure them via a connection service guarantee. Such a connection service guarantee can both be applied to connection oriented networks (connection based) and to packet-oriented networks (data-stream or data type based).

Configuration Queues Meter										
Name	State	Discard	Priority	WFQ queue weights				Rate	Burst	
atm_pvc_0_35	<input checked="" type="checkbox"/>	early	wfq	25%	25%	25%	25%	80%	2 kB	
atm_pvc_8_35	<input checked="" type="checkbox"/>	early	wfq	25%	25%	25%	25%	80%	2 kB	

Click 'Apply' to commit the changes; 'Cancel' to abort.

**IP QoS configuration**

Name:

State:

Discard:

Priority:

WFQ queue Weight 1 (%):

WFQ queue Weight 2 (%):

WFQ queue Weight 3 (%):

WFQ queue Weight 4 (%):

Max highest queue rate (%):

Max highest queue burst:

Quality of Service allows specifying a connection service guarantee via a set of connection parameters. Throughout the network, this set of connection parameters will be used to handle the connection data in a way to achieve the connection service guarantee. This handling includes reserving bandwidth, priority based queuing, scheduling, modifying data characteristics, ...

Examples of connection parameters include the maximum amount of bandwidth that may be used, the guaranteed amount of bandwidth that will always be available, the maximum delay the data can experience throughout the network, a priority indication, ...

**Overview**

The **IPQoS** menu consists of following sections:

- ▶ Configuration
- ▶ Queues
- ▶ Meter

## Configuration

The **Configuration** page allows you to configure IPQoS for a given destination interface for the IPQoS queues instantiation.



When enabling or disabling IPQoS, take the following into account:

- ▶ if the WAN interface (for example PPPoA, IPoA, ...) is detached at the time of enabling/disabling IPQoS, then the WAN interface has to be attached in order for the enabling/disabling of IPQoS to take effect.
- ▶ if the WAN interface is attached at the time of enabling/disabling IPQoS, then the WAN interface has to be detached and then re-attached in order for the enabling/disabling of IPQoS to take effect.

The following settings are available:

- ▶ **Name:**  
The destination interface for the IPQoS queues instantiation.
- ▶ **State:**  
Disable or enable IPQoS for the interface.
- ▶ **Discard:**  
Determines the packet discard strategy in case of congestion. Choose between:
  - ▶ **tail:** Tail Drop: arriving packets will be dropped as soon as the destination queue is in an overflow state.
  - ▶ **early:** Early Packet discard: arriving packets will be dropped early according to the BLUE active queue management algorithm.
- ▶ **Priority:**  
Select the sub queue priority algorithm. Choose between:
  - ▶ **wfq:**  
Weighted Fair Queuing (WFQ) is used for the four AF queues. The realtime queue has priority over the WFQ queues, which have priority over the best-effort queue.
  - ▶ **strict:**  
Priority queuing is used. Strict Priority scheduling is used between all queues. The higher the queue number, the higher the priority.
  - ▶ **wrr:**  
Weighted Round Robin (WRR) is used for the four AF queues. Each queue is scheduled in turn, with a circular "round" wrapping.
- ▶ **WFQ queue Weight:**  
A number between 1 and 97. Represents the weight of the queue used for WFQ or WRR.
- ▶ **Max highest queue rate (%):**  
Represents a percentage of the interface bandwidth for rate-limiting of the Real Time queue. In case of congestion, the Real Time queue will only use this percentage of the interface bandwidth when there is also traffic on the other queues. This prevents other queues from starvation (when the highest uses all bandwidth).
- ▶ **Max highest queue burst:**  
Represents the Real Time queue burst size (in kilobytes) for rate limiting.

**Queues** The **Queues** page allows you to prioritize data.

The following settings are available:

- ▶ **Propagate:**  
If the propagate function is enabled, an overflow to a lower priority queue will be created in case the initial queue is full. If the function is disabled packets in excess of the queue will be dropped.
- ▶ **ECN:**  
If the ECN marking is enabled, the Congestion Experienced code-point in the ECN field is set. This means that when a queue is congested the EC code-point will be set instead of dropping the packet. If the ECN marking is disabled, packets will be dropped if the queue is congested.
- ▶ **AckFilter:**  
If the Ack filtering option is enabled, duplicate ACK packets in a queue will only be sent once. Meaning that the last duplicate ACK packet will be sent and the other ACK packets will be dropped. If the ackfiltering option is disabled, all ACK packets will be sent in their original sequence.

To make changes to the configuration of the queues, simply select or clear the appropriate check box(es).



Selecting or clearing a setting's check box immediately applies the change made to the corresponding setting of the queue.

**Meter** The Meter page allows you to configure rate limiting. This allows aggregated data to be policed to pre-configured bandwidths. This rate limiting can be configured for a specific interface, IP address or service. A meter can be selected by a label or can be interface specific.

The following settings are available:

- ▶ **Name:**  
The name of the IPQoS meter.
- ▶ **Interface:**  
The name of the interface.
- ▶ **Label:**  
The name of the label.
- ▶ **Drop rate:**  
The drop rate in kilobits per second (Kb/s).
- ▶ **Mark rate:**  
The mark rate in kilobits per second (Kb/s).
- ▶ **Burst:**  
The burst size in kilobytes (KB).
- ▶ **Status:**  
The status of the IPQoS meter entry. This can be either **Started** or **Stopped**. To activate or de-activate a particular rate limiting entry, simply select or clear the **Status** check box of the IPQoS meter entry.



Selecting or clearing the check box of an IPQoS meter entry immediately activates or de-activates the corresponding rate limiting.

- ▶ **# dropped:**  
The number of packets that exceeded the drop rate and - as a consequence - are dropped.

- ▶ **# marked:**  
The number of packets that exceeded the mark rate and - as a consequence - are marked.
- ▶ **# compliant:**  
The number of packets that comply to the IPQoS meter rate limits and - as a consequence - can pass.

To add a new IPQoS rate limiting entry:

**1** Click **New**.

**2** Type:

- ▶ a **Name** for the new entry.
- ▶ the **Drop** and **Mark** rate
- ▶ the **Burst size**

**3** Select:

- ▶ the **Interface** to which the entry applies
- ▶ **Drop action**  
You can either choose to simply count the number of packets that exceed the drop rate, or to effectively drop them.
- ▶ **Mark action**  
You can either choose to simply count the number of packets that exceed the mark rate, or to effectively mark them.
- ▶ **Marking**  
In case you have chosen to mark packets that exceed the mark rate, you can select what marking is applied: TOS, DSCP, or Precedence.



Depending on the selected marking you must also select an appropriate **TOS**, **DSCP** or **Precedence** value.

Select **Disabled** in case no marking must be applied.

▶ **Classification**

You can select:

- ▶ **ignore**, so that no changes are made to the classification
- ▶ **overwrite**, so that the internal priority will be overwritten, no matter what the value is
- ▶ **decrease**, so that the internal priority will only be overwritten in case the value defined is lower than the value upon arrival
- ▶ **offset**, to effectively lower the priority setting with a relative offset as defined in **Class** value.
- ▶ **Class**  
The class or offset used for classification.

**4** Click **Apply**.



## 5.4 Connections

Overview The **Connections** menu consists of the following topics:

Click ...	To ...
ATM	view/configure SpeedTouch™'s ATM interfaces.
Routed PPPoE	view/configure the Routed PPP over Ethernet (PPPoE) Internet services.
Routed PPPoA	view/configure the Routed PPP over ATM (PPPoA) Internet services.
Routed PPPoI	view/configure the Routed PPP over ISDN (PPPoI) Internet services.
Bridged Ethernet	view/configure the Bridged Ethernet Internet services.
Routed Ethernet	view/configure the Routed Ethernet Internet services.
Routed IPoA	view/configure the Routed IP over ATM (IPoA) Internet service.
PPTP-to-PPP Relay	view/configure the PPTP-to-PPP Relay Internet services.
Virtual LAN	view/configure the SpeedTouch™ Virtual LAN functionality.

## 5.4.1 ATM

Overview The ATM page consists of following sections:

- ▶ Phonebook
- ▶ QoS Book
- ▶ Interfaces

Phonebook The SpeedTouch™ Phonebook is a repository for ATM connectivity information. A number of pre-configured entries may already reside in the SpeedTouch™ Phonebook.

[Phonebook](#) [Qos Book](#) [Interfaces](#)

	Name	Address	AutoPVC	Available
▶	atm_pvc_0_35	0.35	No	No
■	atm_pvc_8_35	8.35	No	No

Click 'Delete' to remove the selected entry.

Delete Cancel

The Phonebook:

- ▶ Allows you to use named connections.
- ▶ Provides an instant overview of all possible connections.
- ▶ Indicates whether hardware and software resources are actually assigned to Phonebook entries.
- ▶ Resolves conflicts when adding new connectivity information.

Adding a phonebook entry

To add a new Phonebook entry:

- 1 Click **New**.
- 2 In the Name box, type the **Connection Service Name**.
- 3 In the Address box, type the **Virtual Channel Identifiers (VPI and VCI)** (for example 8.35).
- 4 Click **Apply**.

Connection Service Name

There are a few limitations on names:

- ▶ A phonebook name cannot have spaces.
- ▶ The name INCOMING is reserved for internal use.
- ▶ For entries of connection service type PPPoA, planned to be used for the Relayed PPPoA packet service, the phonebook name may not start with capital P or T (Microsoft Windows OS restrictions).
- ▶ Phonebook entries with a name starting with DHCP are reserved for the PPP-to-DHCP spoofing feature of the SpeedTouch™.

Virtual Channel Identifiers (VPI and VCI)

The address format is vpi\*vci, e.g. 8\*35; or vpi.vci, e.g. 8.35.

VPI (Virtual Path Identifier) and VCI (Virtual Channel Identifier) are two parameters identifying ATM Virtual Channels.

It is the responsibility of the network operator to provide end-to-end connectivity throughout the network on these virtual channels. Due to regional differences or because of the specific policy of your local operator, specific VPI/VCI values may be required. In this case, the network operator, ISP or corporate administrator will provide the correct values.

The VPI can range from 0 to 15, VCI from 32 .. 511.

QoS Book

The **QoS Book** table displays following parameters:

- ▶ **Name:**  
The name of the new QoS entry.
- ▶ **txctd:**  
The name of the Connection Traffic Descriptor (CTD) for the transmit (upstream) direction.
- ▶ **rxctd:**  
The name of the CTD for the receive (downstream) direction.

Interfaces

The **Interfaces** tab allows you to configure:

- ▶ **Name:**  
The name of the ATM interface to be configured.
- ▶ **Destination:**  
The WAN destination for this ATM interface. Typically, an ATM phonebook entry.
- ▶ **QoS name:**  
The name of the Quality of Service (QoS) book entry to apply on this ATM interface.
- ▶ **Encapsulation:**  
The type of encapsulation to be used for this ATM interface. Choose between:
  - ▶ **llc:** Logical Link Control (LLC) / Sub Network Access Protocol (SNAP)
  - ▶ **vcmux:** Virtual Channel MULTipleXing (VCMUX).
  - ▶ **auto:** the SpeedTouch™ will determine the encapsulation method to use.
- ▶ **Number of retries:**  
A number between 0 and 65535. Represents the number of times the SpeedTouch™ retries to set up a WAN connection before giving up.
- ▶ **FCS:**  
Enable or disable the inclusion of the Ethernet Frame Check Sequence (FCS) in the packet header on the WAN side (only used for llc encapsulation for mac).



This parameter is normally left disabled.

▶ **Upper layer protocol:**

Select the Upper Layer Protocol (ULP) for this interface. Choose between:

- ▶ **ip** (for a Routed IPoA interface).
- ▶ **mac** (for a Bridged Ethernet, Routed ETHoA, Bridged PPP over Ethernet (PPPoE), Routed PPPoE or a PPPoE Relay interface).
- ▶ **ppp** (for a Routed PPP over ATM (PPPoA) interface).

## 5.4.2 Routed PPPoE

### Introduction

The **Routed PPPoE** configuration page allows you to add new Routed PPPoE, or Routed PPPoE Relay connection entries or to change settings of existing entries.

**Routed PPPoE**

Interface	Destination	Mode	Link	State
▶ Internet	RELAY	Always-On	not-connected	down

Click 'New' to create a new entry.

### Creating a Routed PPPoE connection entry

To add a Routed PPPoE connection entry:

- 1** Click **New**.
- 2** In the **Interface** box, type a unique interface name (different from the MER interface name).
- 3** In the **Destination** list, click the appropriate Routed Ethernet destination indicated by the Routed Ethernet interface name
- 4** Type user name and password for the account at the ISP [optional].
- 5** If applicable, type a Service name and/or Access Concentrator [optional]
- 6** Click **Apply**.

### Additional configuration

Once created, per Routed PPPoE connection, additional configuration is possible by clicking:

- ▶ Routing
- ▶ Other



These parameters can only be modified when the link is down. Take the link down first by clicking **Hang-up**.

### Routing

Following fields are available:

- ▶ **Destination:**  
Controls the networks that can be reached via this particular PPP connection. Specify the remote host or network in prefix notation. e.g. 172.16.0.0/16.
- ▶ **Label:**  
Allows you to assign a label to this connection.

---

**Other** This window holds miscellaneous information and configuration possibilities. Following fields are available:

- ▶ **Mode:**  
A PPP connection can be established in three ways:
  - ▶ **Manually:**  
You have to press the Dial-In button of a particular connection.
  - ▶ **Always-On:**  
The SpeedTouch™ automatically tries to establish PPP connections.
  - ▶ **On-Demand:**  
A PPP connection is triggered by specific frames arriving at the Ethernet port.
- ▶ **Idle Time Limit:**  
Allows you to specify after which time limit the PPP connection is released. Otherwise stated, if no traffic passes over the PPP connection for Idle Time, the connection is closed.
- ▶ **Authentication** allows you to select the default PPP authentication mechanism when starting the PPP session. Via the drop down box, three authentication methods can be selected for the connection:
  - ▶ **Auto (default):**  
Preferably the CHAP (Challenge Handshake Authentication Protocol) will be used. However, if not successful, PAP (Password Authentication Protocol) authentication is used instead. If in turn PAP fails, the connection will NOT be authenticated.
  - ▶ **CHAP:**  
CHAP authentication is forced. If not successful, the connection will NOT be authenticated.
  - ▶ **PAP:**  
PAP authentication is forced. If not successful, the connection will NOT be authenticated.
- ▶ **Local IP and Remote IP:**  
During PPP session setup IP addresses are negotiated. Typically at the client side, these fields are left empty. This forces the client to ask the server for addresses. To setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).
- ▶ **Primary DNS and Secondary DNS:**  
During PPP session setup the BRAS will normally provide the DNS server IP addresses. Typically at the client side, these fields should therefore be left empty.  
  
In cases where the DNS server IP addresses are not provided by the BRAS, or to setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).

---

**Statistics** For a running PPP session the fourth tab allows you to overview following connection statistics:

- ▶ **IP address:**  
local IP address assigned by the server.
- ▶ **Bytes received:**  
Number of bytes received on this PPP connection.
- ▶ **Bytes dropped:**  
Number of bytes failed to transmit.
- ▶ **Bytes sent:**  
Number of bytes transmitted over this PPP connection.

## 5.4.3 Routed PPPoA

**Introduction** The **Routed PPPoA** configuration page allows you to add new Routed PPPoA connection entries or to change settings of existing entries.

### Creating a Routed PPPoA connection entry

To add a Routed PPPoA connection entry:

- 1** Click **New**.
- 2** In the **Interface** box, type a unique interface name (different from the MER interface name).
- 3** In the **Destination** list, click the appropriate Routed Ethernet destination indicated by the Routed Ethernet interface name
- 4** Type user name and password for the account at the ISP [optional].
- 5** Click **Apply**.

### Additional configuration

Once created, per Routed PPPoA connection, additional configuration is possible by clicking:

- ▶ [Routing](#)
- ▶ [Other](#)



These parameters can only be modified when the link is down. Take the link down first by clicking **Hang-up**.

### Routing

Following fields are available:

- ▶ **Destination:**  
Controls the networks that can be reached via this particular PPP connection. Specify the remote host or network in prefix notation. e.g. 172.16.0.0/16.
- ▶ **Label:**  
Allows you to assign a label to this connection.

---

**Other** This window holds miscellaneous information and configuration possibilities. Following fields are available:

- ▶ **Mode:**  
A PPP connection can be established in three ways:
  - ▶ **Manually:**  
You have to press the Dial-In button of a particular connection.
  - ▶ **Always-On:**  
The SpeedTouch™ automatically tries to establish PPP connections.
  - ▶ **On-Demand:**  
A PPP connection is triggered by specific frames arriving at the Ethernet port.
- ▶ **Idle Time Limit:**  
Allows you to specify after which time limit the PPP connection is released. Otherwise stated, if no traffic passes over the PPP connection for Idle Time, the connection is closed.
- ▶ **Authentication** allows you to select the default PPP authentication mechanism when starting the PPP session. Via the drop down box, three authentication methods can be selected for the connection:
  - ▶ **Auto (default):**  
Preferably the CHAP (Challenge Handshake Authentication Protocol) will be used. However, if not successful, PAP (Password Authentication Protocol) authentication is used instead. If in turn PAP fails, the connection will NOT be authenticated.
  - ▶ **CHAP:**  
CHAP authentication is forced. If not successful, the connection will NOT be authenticated.
  - ▶ **PAP:**  
PAP authentication is forced. If not successful, the connection will NOT be authenticated.
- ▶ **Local IP and Remote IP:**  
During PPP session setup IP addresses are negotiated. Typically at the client side, these fields are left empty. This forces the client to ask the server for addresses. To setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).
- ▶ **Primary DNS and Secondary DNS:**  
During PPP session setup the BRAS will normally provide the DNS server IP addresses. Typically at the client side, these fields should therefore be left empty.  
  
In cases where the DNS server IP addresses are not provided by the BRAS, or to setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).

---

**Statistics** For a running PPP session the fourth tab allows you to overview following connection statistics:


- ▶ **IP address:**  
Local IP address assigned by the server.
- ▶ **Bytes received:**  
Number of bytes received on this PPP connection.
- ▶ **Bytes dropped:**  
Number of bytes failed to transmit.



- ▶ **Bytes sent:**  
Number of bytes transmitted over this PPP connection.

## 5.4.4 Routed PPPoI

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Availability	The ISDN modem is only fully functional after activating the ISDN software module with the ISDN software module activation key. For more information, see “5.2.10 Add-on” on page 120.
Introduction	The <b>Routed PPPoI</b> configuration page allows you to add new Routed PPPoI connection entries or to change settings of existing entries.
Creating a Routed PPPoI connection entry	<p>To add a Routed PPPoI connection entry:</p> <ol style="list-style-type: none"><li>1 Click <b>New</b>.</li><li>2 In the <b>Interface</b> box, type a unique interface name.</li><li>3 In the <b>ISP profile</b> list, click:<ul style="list-style-type: none"><li>▶ The name of a profile if you want to use an existing profile.</li><li>▶ <b>New</b> to create a new profile. Type the name you want to assign to this profile in the <b>Enter Name</b> box.</li></ul>These ISP profile contain the ISDN parameters.</li><li>4 Type user name and password for the account at the ISP.</li><li>5 If needed, enter the <b>ISDN parameters</b> of your ISP.</li><li>6 Click <b>Apply</b>.</li></ol>
Additional configuration	<p>Once created, per Routed PPPoI connection, additional configuration is possible by clicking:</p> <ol style="list-style-type: none"><li>1 <a href="#">Routing</a></li><li>2 <a href="#">Other</a></li></ol> <p> These parameters can only be modified when the link is down. Take the link down first by clicking <b>Hang-up</b>.</p>
Routing	<p>Following fields are available:</p> <ul style="list-style-type: none"><li>▶ <b>Destination:</b> Controls the networks that can be reached via this particular PPP connection. Specify the remote host or network in prefix notation. e.g. 172.16.0.0/16.</li><li>▶ <b>Label:</b> Allows you to assign a label to this connection.</li></ul>

---

**Other** This window holds miscellaneous information and configuration possibilities. Following fields are available:

- ▶ **Mode:**  
A PPP connection can be established in three ways:
  - ▶ **Manually:**  
You have to press the Dial-In button of a particular connection.
  - ▶ **Always-On:**  
The SpeedTouch™ automatically tries to establish PPP connections.
  - ▶ **On-Demand:**  
A PPP connection is triggered by specific frames arriving at the Ethernet port.
- ▶ **Idle Time Limit:**  
Allows you to specify after which time limit the PPP connection is released. Otherwise stated, if no traffic passes over the PPP connection for Idle Time, the connection is closed.
- ▶ **Authentication** allows you to select the default PPP authentication mechanism when starting the PPP session. Via the drop down box, three authentication methods can be selected for the connection:
  - ▶ **Auto (default):**  
Preferably the CHAP (Challenge Handshake Authentication Protocol) will be used. However, if not successful, PAP (Password Authentication Protocol) authentication is used instead. If in turn PAP fails, the connection will NOT be authenticated.
  - ▶ **CHAP:**  
CHAP authentication is forced. If not successful, the connection will NOT be authenticated.
  - ▶ **PAP:**  
PAP authentication is forced. If not successful, the connection will NOT be authenticated.
- ▶ **Local IP and Remote IP:**  
During PPP session setup IP addresses are negotiated. Typically at the client side, these fields are left empty. This forces the client to ask the server for addresses. To setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).
- ▶ **Primary DNS and Secondary DNS:**  
During PPP session setup the BRAS will normally provide the DNS server IP addresses. Typically at the client side, these fields should therefore be left empty.  
  
In cases where the DNS server IP addresses are not provided by the BRAS, or to setup the SpeedTouch™ as PPP server, you are able to supply suitable values (according your network configuration).

---

**Statistics** For a running PPP session the fourth tab allows you to overview following connection statistics:

- ▶ **IP address:**  
Local IP address assigned by the server.
- ▶ **Bytes received:**  
Number of bytes received on this PPP connection.
- ▶ **Bytes dropped:**  
Number of bytes failed to transmit.
- ▶ **Bytes sent:**  
Number of bytes transmitted over this PPP connection.

## 5.4.5 Bridged Ethernet

Overview The Bridged Ethernet page consists of following sections:

- ▶ Bridged Ethernet
- ▶ VLAN

### Bridged Ethernet

The Bridged Ethernet page allows you to configure the SpeedTouch™ for IEEE802.1D Transparent Bridging, which equally may include preparing it for Bridged PPPoE.

Next to transparent bridging, the SpeedTouch™ also features full VLAN awareness, and as such allows Ethernet interface grouping or VLAN-tag based forwarding.

The Bridged Ethernet page gives you an overview of all interfaces that are connected to the SpeedTouch™ Ethernet bridge.

**Bridged Ethernet** **VLAN**

	Interface	Destination	State	Port	VLAN
▶	OBC	Internal	connected	OBC	default
▶	ethport1	ethif1	connected	ethport1	default
▶	ethport2	ethif2	connected	ethport2	default
▶	ethport3	ethif3	connected	ethport3	default
▶	ethport4	ethif4	connected	ethport4	default

Click 'New' to create a new entry.

**Properties**

**Aging Time**

Aging ([10..1000000] seconds):

Virtual LAN:

### Bridge properties

Under the Bridged Ethernet overview table are the parameters that are applicable for the Ethernet bridge itself. Following parameters are configurable:

- ▶ Aging time

Using this input, the aging timer of the bridge internal database can be changed. If the aging time of a MAC entry has expired, this entry will be removed from the database.

- ▶ Virtual LAN

By selecting this checkbox, the SpeedTouch™ bridge will become fully **VLAN ID** aware. This means that if incoming Ethernet packets are VLAN tagged, this tag will be taken into account, and as such the packet will only be bridged to the ports that are member of that VLAN.



The SpeedTouch™ will always take into account the VLAN interface configuration that is set. This means that if an interface is configured to be member of VLAN\_A, it will not be able to communicate with an interface that is set to be VLAN\_B, even if the bridge state is set to VLAN=disabled!

### Add a new Bridge port

Proceed as follows to add a new port to the Ethernet Bridge:

- 1** Click **New** under the Bridge Ethernet overview table
- 2** In the **Interface** box, type a unique interface name; in the **Destination** list, select the interface you want to use for this connection.
- 3** Mark the **Multicast filter** checkbox if you wish to filter out multicast streams on this interface. In normal situations multicast packets are flooded on all ports of the bridge, but this might cause unwanted performance issues on some interface types.
- 4** Select the **VLAN name** to which arriving packets on this interface should be assigned. In VLAN enabled mode this is only applicable for untagged packets.
- 5** Select the default **Priority\*** to be used for tagging outgoing VLAN packets on this interface.
- 6** Mark the **Ingress Filtering\*** checkbox to filter out VLAN tagged packets that arrive on an interface that has not the same VID as the packet.
- 7** Mark the **Accept VLAN only\*** checkbox to no longer accept packets arriving on this interface without a VLAN tag.
- 8** Choose your preferred **Priority configuration** from the list. This will make the SpeedTouch™ to map the priority indication in the VLAN packet (IEEE 802.1p value) to an internal priority class. This internal class can be taken into account in other modules of the SpeedTouch™.
  - ▶ Disabled, to not perform priority mapping
  - ▶ Overwrite, to set the VLAN priority indication as the internal priority.
- 9** Click **Apply**.



The parameters that are marked with an asterisk (\*) are only applicable when the SpeedTouch™ Ethernet bridge is in VLAN enabled mode.

### VLAN

Next to transparent bridging, the SpeedTouch™ is also capable of operating in a full VLAN ID aware mode. By using VLAN tagging, it is possible to make distinction between different virtual networks residing on the same physical Ethernet segment, and as such define different properties for them.

### VLAN interface overview

On the VLAN page, there is an overview of all VLANs that are defined in the SpeedTouch™ (through the [Virtual LAN](#) pages) and the bridge ports that are member of it.

VLAN interface  
configuration

---

Proceed as follows to add or remove Bridged Ethernet interfaces for a certain VLAN:

- 1** Select the VLAN you wish to edit.
- 2** A listing of all bridge interfaces will appear, each followed by a drop-down list. Change the value of the drop-down list to add or remove interfaces from this VLAN:
  - ▶ **(none)**, which means that this interface is not a member of the selected VLAN.
  - ▶ **Tagged**, which means that this interface is a member of the selected VLAN, and that packets coming in and going out of the SpeedTouch™ will be VLAN tagged.
  - ▶ **Untagged**, which means that this interface is a member of the selected VLAN, but that the VLAN functionality will be not visible outside the SpeedTouch™. This means that inside the SpeedTouch™ VLAN will be used to isolate interfaces from each other, but that outside of the SpeedTouch™ no VLAN tagging will be used.
- 3** Click **Apply**.

## 5.4.6 Routed Ethernet

### Introduction

The Routed Ethernet web page allows you to add and modify Routed Ethernet interfaces.

Routed Ethernet interfaces can be used for creating end-to-end MAC Encapsulated Routing (MER) connections, or for creating a destination interface to create Routed PPPoE connections on, or to apply a routed PPPoE Relay scenario.

#### Routed Ethernet Configuration

	Interface	Destination	State
▶	wan1	bridge	connected
▶	dmz1	bridge	connected
▶	guest1	bridge	connected

Click 'New' to create a new entry.

New



## 5.4.7 Routed IPoA

### Creating a new Routed IPoA Ethernet Interface

To add a new Routed IPoA Ethernet interface, proceed as follows:

- 1** Click **New**.
- 2** Following fields become available:
  - ▶ **Interface Name:**  
Is a name that has local significance only and allows to reference a particular Routed IPoA interface
  - ▶ **Local IP Address:**  
Is an IP address that must be configured on the local Routed IPoA Ethernet interface and is provided by your ISP or system administrator.
  - ▶ **Remote IP address:**  
Is an IP address that is configured on the device connected at the remote end of the ATM virtual channel and is again supplied by your ISP or system administrator
  - ▶ **Destination Network:**  
This input field allows to specify all networks (0.0.0.0/0), a summarized network (e.g. 20.0.0.0/24, 20.0.1.0/24, 20.0.2.0/24 and 20.0.3.0/24 can be summarized into 20.0.0.0/22) or a specific network (e.g. 20.0.0.0/24). Additional networks can be specified via entries in the forwarding table.
- 3** In the **Interface** box, type a unique interface name.
- 4** In the **Destination** list, select the interface you want to use for this connection.
- 5** Assuming a numbered IPoA link, configure the Local and Remote IP addresses.
- 6** If required enable NAPT via the NAPT box (by default unchecked)
- 7** For IP connectivity beyond the local and remote IP address, a single or summarized network can be supplied in the **Destination Network** field. In the ultimate case "all destination networks" can be specified via the so-called default route (0.0.0.0/0).
- 8** Click **Apply**.

If all field values are correctly specified, the Routed IPoA interface is created and attached to the specified ATM virtual channel.

### Generated IP routes

In the assumption that Local IP, Remote IP and Destination Network are specified, 3 IP routes are automatically added:

- ▶ A host route to Local IP address
- ▶ A host route to the Remote IP address
- ▶ A network route to the specified Destination Network.

## 5.4.8 PPTP-to-PPP Relay

---

**Overview** The PPTP-to-PPP Relay, referred to as "Relay" further in this section, interacts with a PPTP tunnelling application installed on the locally attached computers, for example Microsoft's Dial-Up Networking.

A typical user-relay interaction scenario is as follows: A PPTP Tunnelling application is started on one of the locally attached computers. This application establishes a PPTP tunnel to the SpeedTouch™ and is the trigger for the Relay to come into action. The Relay chooses a free PPPoA phonebook entry and from then on relays all PPP frames sourced by the PPTP application from the tunnel to the virtual channel identified by the phonebook entry and vice versa. At the remote end of the virtual channel, the BRAS extracts the PPP frames, reconstructs the encapsulated IP packets and forwards these to the Internet.

If, at the end of a session, the user disconnects the PPTP application, it destroys the tunnel and the Relay subsequently releases the virtual channel.

Multiple users can initiate/terminate tunnels towards the Relay as long as there are free ATM virtual channels on the DSL Line. The maximum number of tunnels may however be restricted by DSL provider / ISP provisioning rules.

The SpeedTouch™ Relayed PPPoA page allows you to overview current active relay session, currently maintained by the SpeedTouch™.

## 5.4.9 Virtual LAN

**Concept** The concept of VLAN was introduced as a way to solve many of the issues of a large Layer 2 environment. It controls the traffic on a physical LAN. The physical LAN is partitioned into multiple virtual LANs. Each VLAN is assigned a number, called the VID, which identifies it uniquely within the network. Traffic between these systems stays bottled up within their VLAN.

Although different VLANs use a common physical network, the traffic of each VLAN is isolated from the other VLANs.

### The Virtual LAN page

The Virtual LAN page gives you an overview of the Virtual LANs currently defined on the SpeedTouch™. It also allows you to add new VLANs, and delete existing VLANs.

**Virtual LAN**

	Identification	Name
▶	1	default
▶	3	wan
▶	4	dmz
▶	5	guest
■	-	-

Click 'Apply' to commit changes.

**VLAN properties**

Name:

Vid [2..508]:

Apply Clear Cancel

### Creating a new VLAN

To add a Virtual LAN:

- 1** Click **New**.
- 2** In the **Name** box, type a unique name that describes the use of the VLAN.
- 3** In the **VID** box, enter the unique VLAN ID to be used for this VLAN.
- 4** Click **Apply** to create the VLAN you have defined.
- 5** Click **Save All** to make your changes permanent.

### Using VLAN

The Virtual LANs that are defined can be used in the Ethernet Configuration pages as described in "5.4.5 Bridged Ethernet".

## 5.5 Local Networking

Overview The **Connections** menu consists of the following topics:

Click ...	To ...
DHCP	View/configure the SpeedTouch™ DHCP settings.
DNS	View/configure the SpeedTouch™ DNS settings.
Managed Switch	View/configure the SpeedTouch™ Managed Switch.
Wireless	View/configure the SpeedTouch™ wireless access point settings.

## 5.5.1 DHCP

**Overview** The DHCP web page offers three tabs to configure the SpeedTouch™ 's DHCP functionality:

- ▶ **DHCP Server:**  
To configure the general behaviour of the SpeedTouch™ 's DHCP server.
- ▶ **DHCP Relay:**  
To configure the SpeedTouch™ DHCP relay.
- ▶ **DHCP Client:**  
To configure the SpeedTouch™ DHCP client.

DHCP Server						
DHCP Relay						
DHCP Client						
Server Config						
Server Leases						
Address Pools						
Name	Start Address	End Address	Interface	State	PPP	
▶ LAN_private	192.168.1.64	192.168.1.253	lan1	static	-	
▶ GUEST_private	192.168.3.64	192.168.3.253	guest1	static	-	
▶ DMZ_private	192.168.2.64	192.168.2.253	dmz1	static	-	

Click 'New' to create a new entry.

**DHCP Server** The DHCP server configuration is split up in three sections:

- ▶ **Server Config:**  
To configure the SpeedTouch™ DHCP server 'master' settings and behaviour.
- ▶ **Server Leases:**  
To overview current the SpeedTouch™ DHCP server's current leases, and/or add/delete static DHCP lease entries.
- ▶ **Address Pools:**  
To overview and add/delete DHCP address pools for the SpeedTouch™ DHCP server.

As mentioned before, the SpeedTouch™ DHCP server - configuring local network hosts - can be run in conjunction with one or more SpeedTouch™ DHCP clients or SpeedTouch™ DHCP Relay agents, each created on behalf of a wide area connection. I.e. for WAN interfaces the SpeedTouch™ offers DHCP client, or DHCP relay support to configure MAC Encapsulated Routing (MER) or Routed IPoA interfaces independently.

**Server Config** Following fields are available:

- ▶ **Activate server:**  
Select this check box to enable the SpeedTouch™ DHCP server.
- ▶ **Activate verify first:**  
Select this check box to enable IP address conflict network probing before handing out an address to a client.
- ▶ **Activate trust client:**  
Select this check box if you want the SpeedTouch™ to take the IP address suggested by a DHCP client into account.

## Server Leases

In case the SpeedTouch™ DHCP server is running this table holds all leases which are assigned by the DHCP server to (accepted) DHCP clients.

Following lease parameters are shown:

- ▶ **Client ID:**  
The MAC address of the DHCP client.
- ▶ **Address:**  
The IP address leased by the DHCP client.
- ▶ **Pool:**  
The DHCP server address pool the lease IP address is taken from.
- ▶ **TTL:**  
The DHCP server lease's Time To Live (in seconds).  
For a permanent DHCP lease, TTL displays **infinite**.
- ▶ **State:**  
The DHCP server lease state:
  - ▶ **Free** (in case of statically added DHCP leases):  
Indicating unused DHCP server leases. No DHCP request from this particular Client ID has been received by the DHCP server (yet).
  - ▶ **Used:**  
Indicating assigned DHCP leases. A DHCP lease has been assigned to this Client ID in the past (actually (Pool lease time)-TTL seconds ago).

As soon as a DHCP request is received, the SpeedTouch™ DHCP server will assign the IP address matching the DHCP client's identity to this client (e.g. in case of a renewal, or for static entries). If no pre-configured lease could be found in the table, a new lease will be created when the client's request is granted.



Existing DHCP leases can be made static (i.e. TTL infinite) by selecting the DHCP lease and clicking **Lock**.

DHCP leases can be added manually, e.g. for DHCP client devices that need a "static" IP configuration. You can also remove existing DHCP leases.

## Address Pools

One or more disjunctive DHCP server address pools can be created per existing SpeedTouch™ interface using the **Address Pool** table. The first address pool displayed in the table has the highest priority for a certain interface.

If you select one of the address pools, following fields become available:

- ▶ **Name:**  
The name of the DHCP server's address pool.
- ▶ **Interface:**  
The SpeedTouch™ interface for which the address pool applies.
- ▶ **Start address:**  
The start IP address of the DHCP server's address pool.
- ▶ **End address:**  
The end IP address of the DHCP server's address pool. Both the start and end IP address define the IP address range used by the DHCP server to assign leases.
- ▶ **Subnet mask:**  
The subnet mask of the DHCP server's address pool.
- ▶ **Lease time:**  
The maximum time a client is allowed to use the address.
- ▶ **Gateway:**  
The IP address that will be assigned to DHCP clients as their default gateway
- ▶ **Server:**  
The SpeedTouch™ IP address used as DHCP server address (applicable for SpeedTouch™ multi-homing).
- ▶ **Primary DNS Server:**  
The IP address of the primary DNS server.
- ▶ **Secondary DNS Server:**  
The IP address of the secondary DNS server.

The table header shows following pool properties in addition:

- ▶ **State:** the current DHCP server's address pool state.
- ▶ **PPP:** the PPP interface used to fill the DHCP server's address pool dynamically (dynamic pools only).

## Address pool types

Two kinds of DHCP server address pools can be envisaged:

- ▶ Static address pools.
- ▶ Dynamic address pools.

Static address pools are configured manually by the user (state = static); on the other hand dynamic pools are configured dynamically based on the PPP-IPCP parameters negotiated for a (Routed) PPP connection (PPP interface given in the PPP column). When the PPP connection is up (state = up), all pool properties are defined except for the lease time which has to be configured manually. At the moment the PPP connection goes down (state = down) the pool parameters are remain valid to preserve LAN connectivity. If the pool parameters have been changed after the PPP connection comes up again, all associated leases are updated as well.

---

**DHCP Relay** The **DHCP relay** tab allows you to add/delete and overview SpeedTouch™ 's DHCP relay interfaces.

The DHCP relay configuration is split up in two sections:

- ▶ **Relay Config**  
To add/delete and configure a DHCP relay server on a certain interface
- ▶ **Relay Interfaces**  
To enable/disable and define the behaviour of the DHCP relay agent per configured interface.

---

**Relay Config** The Relay Configuration table allows you to add or delete (additional) DHCP relay agents for a specific interface.

To create a new DHCP relay agent:

- 1** Click **New**.
- 2** In the **DHCP relay server** box, type the IP address of the DHCP server.
- 3** In the **Interface** list, click the appropriate relay interface (click **None** to indicate no interface is specified).
- 4** In the **Gateway Address (giaddr)** box, type the Gateway IP address to be used for the giaddr field in relayed DHCP packets.
- 5** Click **Apply**.

---

**Relay Interfaces** The **Relay Interfaces** table allows you to configure interface specific DHCP relay settings as:

- ▶ Enable/disable the DHCP relay server
- ▶ The maximum number of hops allowed for relayed DHCP requests and replies (as indicated in the DHCP packet)
- ▶ Defining whether to forward (trusted) or to drop (not trusted) DHCP request packets when a DHCP relay agent info option is present and the Gateway IP address field is 0 (as specified in RFC3046).
- ▶ Define the remote ID (as specified in RFC3046) to allow the DHCP relay agent to relay DHCP responses to the proper network.



**DHCP Client** Dynamic interfaces are created and managed by means of the **DHCP Client** table.

Following fields are listed in the **DHCP Client** table:

- ▶ **Interface:**  
The name of the SpeedTouch™ logical interface for which this DHCP client applies
- ▶ The **Address** column shows the IP address assigned to the interface given in the first column.
- ▶ The **State** column shows the current state of the dynamic interface. According to RFC2131, following states are envisaged:
  - ▶ **init:**  
The DHCP client hasn't been activated yet. (You can activate a DHCP client entry by selecting it and clicking Enable.
  - ▶ **requesting:**  
The DHCP client is searching for a DHCP server.
  - ▶ **selecting:**  
The DHCP client requests a server for an IP address.
  - ▶ **bound:**  
A dynamic IP address has been assigned by the DHCP server.
  - ▶ **renewing:**  
The DHCP client requests a known server to extend its lease.
  - ▶ **rebinding:**  
The DHCP client searches a server to extend its lease.
- ▶ The **Timeout** column is filled in for each DHCP client which is currently in the "bound" state. It indicates the lease time of the assigned IP address.

For each of these interfaces you can configure following fields:

- ▶ **IP Address:**  
The preferred IP address to be assigned to the DHCP client. If not accepted, the (remote) DHCP server may overrule this address.
- ▶ **Client ID:**  
MAC address of the SpeedTouch™ logical interface, to be communicated to the (remote) DHCP server. If empty, the SpeedTouch™ 's MAC address is used.
- ▶ **Host name:**  
The host name associated with the dynamic IP address, to be communicated to the (remote) DHCP server
- ▶ **User ID:**  
The user class identifier option to be associated with the lease.
- ▶ **Lease time:**  
The preferred duration of the lease of the dynamic IP address, if assigned. If not accepted, the (remote) DHCP server may overrule this lease time.
- ▶ **Vendor ID:**  
Enable transmission of the vendor class identifier option (selected) or not (cleared).

## 5.5.2 DNS

### Overview

DNS is short for Domain Name System. It is a network functionality that allows network members to use host names rather than IP addresses for referencing networked computers.



The DNS web page consists of two sections:

- ▶ Configuration
- ▶ Hostname Table

### Configuration

In addition to the host name, a local computer needs the DNS domain name to construct a fully qualified name. By default the SpeedTouch™ DNS's domain name is lan. You can specify another (sub)domain name in the domain field (and **Apply**)

In normal conditions you should never disable the SpeedTouch™ DNS server, surely not in case the SpeedTouch™ DHCP server is active on the local network as well. If required however, you can disable the SpeedTouch™ DNS server by clearing **Activate Server** (and **Apply**).



Disabling the SpeedTouch™ DNS server will disable all DNS forwarding functionality as well. This may compromise end-to-end connectivity through the SpeedTouch™ connections.

### Hostname Table

The **Hostname Table** shows all DNS host names (with respective IP address) the SpeedTouch™ DNS server is aware of (for example entries created via DHCP server replies to leases).

If not all computers reveal their hostname in the DHCP request, or even worse if they do not support DHCP, static entries can be added to the local DNS database.

Proceed as follows:

- 1** Click **New**.
- 2** In the **Hostname** field, type the name you want to associate to the specified IP address.
- 3** In the **Address** box, type the IP address of the computer.
- 4** Click **Add**.



Make sure to keep the database consistent.

## 5.5.3 Managed Switch

### Overview

Your SpeedTouch™ is equipped with a four-port 10/100Base-T auto-sensing MDI/MDI-X Ethernet switch. Each physical Ethernet port of the switch can be managed individually for extended networking control and monitoring purposes.

#### Managed Ethernet Switch

	Port	Group	State	Speed/Duplex	Result Type
▶	1	-	Enabled	Auto	100BaseTFD
▶	2	-	Enabled	Auto	Not connected
▶	3	-	Enabled	Auto	Not connected
▶	4	-	Enabled	Auto	Not connected

Select an entry to change its configuration.

Flush

#### Mirror Configuration

Monitor traffic on (capture port):

Capture incoming traffic from (ingress mirror port):

Capture outgoing traffic from (egress mirror port):

Click 'Apply' to commit configuration changes.

Apply

The **Managed Switch** page consists of two sections:

- ▶ **Managed Ethernet Switch**
  - ▶ provides an overview of each individual Ethernet port.
  - ▶ Allows per Ethernet port to configure some Ethernet port properties.
- ▶ **Mirror Configuration** allows you to configure port mirroring and traffic capturing.

### Managed Ethernet Switch

Under **Managed Ethernet Switch**, you can select a port to change:

- ▶ **State.**  
Allows you to enable/disable the interface.
- ▶ **Speed/Duplex.** Select either:
  - ▶ **auto:**  
Auto negotiation of Ethernet communication speed (10Mb/s or 100Mb/s) and Duplex mode (half duplex or full duplex).
  - ▶ **10BaseTHD:**  
10Mb/s communication speed in half duplex mode.
  - ▶ **10BaseTFD:**  
10Mb/s communication speed in full duplex mode.
  - ▶ **100BaseTHD:**  
100Mb/s communication speed in half duplex mode.
  - ▶ **100BaseTFD:**  
100Mb/s communication speed in full duplex mode.

#### Mirror Configuration

---

Port mirroring allows monitoring from one port (called mirrored port) to another port (called mirror capture port). This functionality allows any port's Ingress and/or Egress traffic to be monitored to a pre-defined "mirror capture port".

Depending on your configuration you can mirror (from mirror port to mirror capture port):

- ▶ The outgoing traffic
- ▶ The incoming traffic
- ▶ Both incoming and outgoing traffic.

## 5.5.4 Wireless

---

**Availability** This page is only available on SpeedTouch™ devices equipped with a wireless access point.

---

**Overview** The SpeedTouch™ IEEE802.11g compliant Wireless LAN (WLAN) interface allows you to share its high-speed Internet connection with multiple networking clients in a local network, without needing to (re-)wire your home.

The SpeedTouch™ acts as a wireless Access Point (AP), connecting wireless clients and transferring data between them.

The wireless web page consists of four sections:

- ▶ **Access point settings** to configure the basic settings of the SpeedTouch™ wireless access point
- ▶ **Security** to overview and control the security settings and wireless client access to the SpeedTouch™ 's wireless network segment
- ▶ **Associated stations** to overview the wireless stations, currently associated with the SpeedTouch™ wireless access point.
- ▶ **Networks** to scan for wireless clients in your neighbourhood and scan for, view, configure WDS connections with other wireless devices.



Be aware that in case you are connected wirelessly to the SpeedTouch™ and you change its wireless access point settings, wireless connectivity may be lost!

## Access point settings

This section provides an overview and allows you to configure the basic wireless networking parameters for your SpeedTouch™ wireless access point.

Access Point Settings	Security	Associated Stations	Networks
Network name (SSID):	<input type="text" value="SpeedTouch123456"/>		
Rate:	<input type="text" value="54 Mbps"/>		
Interoperability Mode:	<input type="text" value="802.11b/g"/>		
Channel Selection:	<input type="text" value="6"/>		
Regulatory Domain:	<input type="text" value="Europe"/>		
Only stations with correct Network name (SSID) can connect:	<input type="checkbox"/>		
Framebursting:	<input type="checkbox"/>		
Wireless interface enabled:	<input checked="" type="checkbox"/>		
<small>Please note that changing the wireless settings may cause loss of wireless connectivity. You may need to reconfigure your wireless stations to restore connectivity. Consult your user guide for further information.</small>			
<input type="button" value="Apply"/>			

Following wireless access point settings can be viewed or configured:

- ▶ **Network Name (SSID):**  
The network name, also known as Service Set ID (SSID). For more information, see “ Network Name (SSID)” on page 165.
- ▶ **Rate:**  
Displays the current modulation rate in which the SpeedTouch™ is operating. Take into consideration that if the distance between the SpeedTouch™ and the clients increases the throughput decreases. Walls, closets and big metal objects have a negative influence.
- ▶ **Interoperability Mode**
- ▶ **Channel Selection** allows you to choose between:
  - ▶ **Auto:**  
The best communication channel is automatically selected by the SpeedTouch™ (recommended setting). The **Current Channel** displays the channel currently in use.
  - ▶ A specific channel.
- ▶ **Regulatory Domain** displays the access point’s Regulatory Domain.
- ▶ **Only stations with correct Network name (SSID) can connect:**  
If this check box is:
  - ▶ Cleared, the SpeedTouch™ broadcasts its SSID and accepts every client.
  - ▶ Selected, the SpeedTouch™ does not broadcast its SSID and accepts only those clients who have the correct Network name (SSID).
- ▶ **Framebursting:**  
Allows you to enhance the performance of wireless networks by improving the efficiency between the client and the access point if you have mainly downstream traffic.
- ▶ **WMM:**  
WMM is enabled by default. Clear the check box to disable WMM.
- ▶ **Allow multicast frames sent to local clients.**
- ▶ **Wireless interface enabled:**  
Allows you to enable/disable the wireless interface.

### Network Name (SSID)

The WLAN's 'radio' link is a shared medium. As no physical connection exists between the SpeedTouch™ and wireless clients, a name must be given to allow unique identification of your WLAN radio link. This is done by the Network Name, also known as Service Set ID (SSID). Wireless clients must be configured for the same Network Name in order to be able to communicate with other clients on the (W)LAN - via the SpeedTouch™ wireless access point.

To change the Network Name (SSID):

- 1 Type a Network Name of your choice.
- 2 Click **Apply** to immediately apply your changes.

### Network Name broadcast

By default the access point broadcasts its SSID and accepts every client. However, for security reasons you are able to configure not to broadcast its SSID and to accept only those clients who have exactly the same SSID, as configured on the SpeedTouch™

To change the Network Name broadcasting configuration:

- 1 Select **Only stations with correct Network Name (SSID) can connect** to disable Network Name broadcasting.
- 2 Click **Apply** to immediately apply your changes.

When you enable this option, the SSID will not be broadcasted. The SpeedTouch™ wireless network will no longer be visible in the list of available networks of your wireless client.

### Interoperability Mode

By default the **interoperability mode** allows for both IEEE 802.11g compliant wireless clients and IEEE 802.11b compliant wireless clients to connect to the SpeedTouch™.

To change the interoperability mode:

- 1 Select the desired option:
  - ▶ **802.11g and b** to allow both IEEE802.11b and IEEE802.11g compliant wireless clients to connect to the SpeedTouch™
  - ▶ **802.11g only** to allow only IEEE802.11g compliant wireless clients
- 2 Click **Apply** to immediately apply your changes.

### Channel

By default the SpeedTouch™ chooses its radio channel automatically at start-up of the access point on basis of the least interference with other access points.

To update the channel:

- 1 Click update to let the SpeedTouch™ re-evaluate the aerial conditions to base the new channel selection on. Your changes will immediately be applied.

Wireless associated clients always follow the access point's radio channel selection. They will change their channel into that of the new updated channel selection.

To configure a fixed channel:

- 1 In the **Channel Selection** list, click the desired channel. Be aware of your region limitations.
- 2 Click **Apply** to immediately apply your changes.

To return to auto mode:

- 1 In the **Channel Selection** list, click **auto**.
- 2 Click **Apply** to immediately apply your changes.

Enable/disable the wireless interface

To disable your wireless interface:

- 1 Clear **wireless interface enabled**.
- 2 Click **Apply** to immediately apply your changes.



All your wireless clients will be disconnected!



You can also disable your wireless interface by pressing the front panel button for 10 seconds. When the WLAN led is extinguished, the interface is disabled.

To enable the wireless interface:

- 1 Select **Wireless interface enabled**.
- 2 Click **Apply** to immediately apply your changes.



You can also enable your wireless interface by pressing the front panel button for 10 seconds until the WLAN led starts flashing.

Security

The security configuration tab allows you to configure the SpeedTouch™:

- ▶ [Security Mode](#) settings.
- ▶ [Access Control](#) settings.

Security Mode

Three security levels are available for protecting the SpeedTouch™ wireless network environment.

- ▶ **level 0:**  
No security, i.e. the data will not be encrypted, no authentication process will be used.
- ▶ **level 1:**  
Backwards compatible security with any Wi-Fi certified client(WEP), i.e. encrypting the traffic between the SpeedTouch™ and the clients by sharing a pre-defined 64-bit or 128-bit Network key.
- ▶ **level 2:**  
[WPA-PSK](#) is the highest form of security available for home users but make sure that your wireless client and client manager are compatible with it.
- ▶ **level 3:**  
WPA is the highest form of security available but make sure that your wireless client and client manager are compatible with it. If you want to use this level of encryption you must have a RADIUS (Remote Authentication Dial-in User Service) server installed on your network.

By default the SpeedTouch™ access point uses security level 0, implying that no encryption is used for wireless networking. In case security level 1 or 2 is active, select **Security Level 0 - no encryption** to return to security level 0. Selecting this security level has immediate effect. Data will no longer be encrypted. Therefore, to re-access the wireless environment of the SpeedTouch™ you must first disable security on your wireless client.



---

**WEP** The Wired Equivalent Privacy (WEP) algorithm is used to protect wireless communication from eavesdropping.

WEP relies on a secret key that is shared between the wireless client (e.g. a laptop with a wireless ethernet card and the SpeedTouch™). The fixed secret key is used to encrypt packets before they are transmitted. I.e. during transmission between client and AP ("in the air") the information in the packets is encrypted

To enable level1 - WEP:


- 1** Select **Security Level 1 - WEP**.
- 2** In the **Type** list, click the desired Data Security level (either 64-bit or 128-bit and Alphanumeric or Hexadecimal).
- 3** In the **Encryption key** box, type a Network key of your choice. In case of:
  - ▶ **64 bits, Alphanumeric:**  
The 40-bits Network key must consist of 5 alphanumeric characters.
  - ▶ **64 bits, Hexadecimal:**  
The 40-bits Network key must consist of 10 hexadecimal digits.
  - ▶ **128 bits, Alphanumeric:**  
The 104-bits Network key consists of 13 alphanumeric characters.
  - ▶ **128 bits, Hexadecimal:**  
The 104-bits Network key consists of 26 hexadecimal digits.
- 4** Click **Apply** to immediately apply your changes.

---

**WPA-PSK** The SpeedTouch™ supports WPA-PSK which has 3 improvements regarding to WEP:

- ▶ Authentication via a 4-way handshake to check whether the Pre-Shared Keys (PSKs) are the same.
  - ▶ Stronger encryption types:
    - ▶ Temporal Key Integrity Protocol (TKIP) (default): Instead of using a fixed WEP key, TKIP uses in pairs temporary session keys which are derived from the PSK during the 4-way handshake. For each packet it uses a different key. TKIP also provides a message integrity check (MIC) and a rekeying mechanism (in seconds).
    - ▶ Advanced Encryption Standard (AES): State-of-the-art encryption; can only be used if all wireless devices in your WLAN support AES.
- ▶ Message Integrity Check (MIC), which is a strong mathematical function in which the recipient and transmitter each compute and compare the MIC. If they don't match it is assumed that a third person has been trying to read the data.

To enable level2 - WPA-PSK:

- 1** Select **Security Level 2 - WPA-PSK (WPA Personal)**.
- 2** In the **WPA passphrase** box, type a passphrase (also known as Pre-shared key) of your choice. The passphrase must consist of 8 to 63 ASCII characters or 64 HEX digits.
- 3** In the **Encryption** list, click the desired Encryption method (either TKIP or AES).
  -  AES is not yet implemented in most clients but AES is implemented in the SpeedTouch™ because it will be the future security standard.
- 4** Optionally select the rekeying interval.
- 5** Click **Apply** to immediately apply your changes.

---

**WPA** WPA is the highest form of security available but make sure that your wireless client and client manager are compatible with it. If you want to use this level of encryption you must have a RADIUS (Remote Authentication Dial-in User Service) server installed on your network.

To enable level2 - WPA:

- 1 Select **Security Level 2 - WPA**.
- 2 Enter the RADIUS settings provided by your network administrator in the appropriate fields.
- 3 Click **Apply** to immediately apply your changes.

---

## Access Control

Wireless client access control allows to authorize or explicitly inhibit access between specific wireless clients and the SpeedTouch™ wireless access point based on the wireless client's MAC address.

The **Access Control** tab allows you to manage the SpeedTouch™ Access Control List (ACL).

By default **New stations allowed automatically** is selected. Any client with the correct wireless settings (Network Name and, if required, Network key) will be automatically associated to the SpeedTouch™ and will be allowed to send/receive data via the SpeedTouch™ wireless access point. In case **New wireless client allowed** is not selected, you must manually add the wireless clients and their authorization to the access control list.

You can use the Association / Registration button to allow wireless clients to enter the access control list. This button can be found on the back panel of the SpeedTouch™, or on the **Access Control** tab. Pressing this button triggers the SpeedTouch™ to unlock the access control list for a time frame of one minute, after which the access control list is locked again. Any wireless clients trying to associate with the SpeedTouch™ having the correct wireless settings (Network Name and, if required, Network key) will be added to the table.

Per wireless client present in the access control list, the following information is provided and can be re-configured:

- ▶ An intuitive name for the wireless client
- ▶ Whether the wireless client is allowed (select yes) or not (select no) to exchange data between the wireless clients and the SpeedTouch™.

Regardless of whether registration of wireless clients is controlled via the Association / Registration button or not, you can always manually add/delete clients to/from the access control list or define wireless clients that are specifically allowed (select **yes**) or not allowed (select **no**) to access the SpeedTouch™ wireless network.

To delete all wireless clients from the access control list, click **Flush**. Be aware that if you are connected wirelessly to the SpeedTouch™, you will lose your connection.

---

## Associated stations

The **Associated Stations** tab allows you to overview the currently associated clients.

To add an associated station to the access control list:

- 1 Select the entry you want to explicitly add to the ACL. Associated stations that are not present in the ACL yet, are identified by the name **Not Registered (ACL)**.
- 2 To change the access rights for this station, click **Access Control**.
- 3 Change the name of the station (optional but recommended).
- 4 In the **Allowed** list, click:

- ▶ **Yes** to allow it to exchange data with other stations.
  - ▶ **No** to explicitly deny the station to associate with the SpeedTouch™.
- 5** Click **Apply** to immediately apply your changes.

#### Networks

The **Networks** tab allows you to:

- ▶ Scan for **Other Networks**.
- ▶ Enable **WDS** connections with other wireless devices.

#### Other Networks

The **Other Networks** tab allows you to overview the wireless networks in your neighbourhood.

To scan for other wireless networks:

- 1** Click **Scan**.
- 2** The SpeedTouch™ scans all channels for wireless networks.
- 3** The SpeedTouch™ lists the available networks in the table.

#### WDS

The Wireless Distribution System (WDS) allows you to extend the range of your SpeedTouch™ by means of one or more wireless repeater(s).

To allow a WDS connection with a specific access point:

- 1** Click **New**.
- 2** In the **Name** box, type an appropriate name for the access point.
- 3** In the **BSSID** box, type the BSSID of the access point.

## 5.6 Firewall

Overview The **Firewall** menu consists of the following topics:

Click ...	To ...
Expressions	view/configure interface, or IP, or Service related expressions. For more information, see "5.3.2 Expressions" on page 123.
Policy	view/configure the SpeedTouch™ Stateful Inspection Firewall security level and its policies.
Log	view log messages for SpeedTouch™ firewall events.

## 5.6.1 Policy

### Firewall levels

The **Level** list allows you to choose between the following level:

- ▶ **Disabled:**  
All traffic is allowed to pass through your SpeedTouch™. Game and Application sharing is allowed by the firewall.
- ▶ **BlockAll:**  
Use this Security Level to block all traffic from and to the Internet. Game and Application sharing is not allowed by the firewall.
- ▶ **High:**  
Use this Security Level to block all outgoing connections except well known applications (DNS, HTTP, HTTPS, FTP, TELNET, IMAP, POP) and block all incoming connections. Game & Application sharing is not allowed by the firewall.
- ▶ **Medium:**  
Use this Security Level to allow all outgoing connections except Windows protocols (NetBIOS, RPC, SMB) and block all incoming connections. Game and Application sharing is allowed by the firewall.
- ▶ **Standard:**  
Use this Security Level to allow all outgoing connections and block all incoming traffic. Game and Application sharing is allowed by the firewall.
- ▶ **Low:**  
Use this Security Level to allow all outgoing connections and block all incoming traffic except Internet Control Management Protocol (ICMP). Game and Application sharing is allowed by the firewall.

#### Security Level: Disabled

Level:	Standard
Description:	Use this Security Level to allow all outgoing c
Loose UDP tracking:	<input checked="" type="checkbox"/>
Game & Application Sharing Allowed:	<input checked="" type="checkbox"/>
Proxying allowed:	<input checked="" type="checkbox"/>
Readonly:	<input checked="" type="checkbox"/>

#### Firewall Policy

Nr	Name	Action	Service	Src Intf	Src IP	Dst Intf	Dst IP	Log	Hits
Module 'level': Firewall Level Module									
1	<input checked="" type="checkbox"/> ToGuest	drop	Any	Any	Any	guest	Any	<input type="checkbox"/>	0
2	<input checked="" type="checkbox"/> FromLAN	accept	Any	lan	Any	Any	Any	<input type="checkbox"/>	0
3	<input checked="" type="checkbox"/> GuestToWAN	accept	Any	guest	Any	wan	Any	<input type="checkbox"/>	0
4	<input checked="" type="checkbox"/> DMZToWAN	accept	Any	dmz	Any	wan	Any	<input type="checkbox"/>	0
5	<input checked="" type="checkbox"/> WANToDMZ	accept	Any	wan	Any	dmz	Any	<input type="checkbox"/>	0
6	<input checked="" type="checkbox"/> DMZToDMZ	accept	Any	dmz	Any	dmz	Any	<input type="checkbox"/>	0
7	<input checked="" type="checkbox"/> ToTunnel	accept	Any	Any	Any	tunnel	Any	<input type="checkbox"/>	0
8	<input checked="" type="checkbox"/> FromTunnel	accept	Any	tunnel	Any	Any	Any	<input type="checkbox"/>	0

---

Buttons

Click:

- ▶ **Customize...** to create a new firewall level starting from the selected firewall level. For more information, see “ [Creating a firewall rule](#)” on page 173.
- ▶ **Set Active** to activate the selected firewall rule.




To save the new configuration, click **Save All**.

---

Loose UDP tracking

If this check box is:

- ▶ **Selected:**  
The source port of the original UDP connection is opened for all hosts which want to connect to this port.  
 This can be configured for example for gaming: to allow the client to receive information from other players of the same online game, loose udp tracking should be configured to allow incoming packets on the port that was used to start the communication with the server.
  - ▶ **Cleared:**  
Only returning UDP streams belonging to the same connection are allowed.
- 

Game & Application  
Sharing Allowed

Select this check box to allow the firewall to open ports for "games and application sharing" in order to use applications like Peer-to-Peer file sharing (PtoP), Internet Games, Web serving, FTP serving, WebCams, IRC DDC, and Instant Messaging such as AIM, ICQ, Yahoo and MS Messenger.

---

Proxying allowed

Select this check box to allow the firewall to act as a proxy server.

A proxy server acts both as a server and a client for the purpose of making requests on behalf of other clients. Requests are serviced internally or by passing them on to other servers. A proxy interprets, and, if necessary, rewrites a request message before forwarding it. For example HTTP Intercept.



---

Read only

The default levels are set read only to indicate you cannot change or add rules. Click **customize** to copy the level and add or change rules. The read only check box is only present when a default level is active.

Creating a firewall rule

Proceed as follows to create a new security level and to add rules:

- 1** Select one of the six security levels.
- 2** Click **Customize**.
- 3** Type name and description for the new security level and click **Apply**.
- 4** Click **New** to add a rule.
- 5** Fill in all the fields.
  - ▶ **Index:**  
The index of the firewall rule. The firewall hierarchically goes through the rules, starting from rule 1. When no rule is hit, the firewall will block the traffic because of his default behaviour.
  - ▶ **Name:**  
The name of the rule.
  - ▶ **Source Interface:**  
The source interface. (e.g. \_lan1, \_wan1, \_dmz1,...)
  - ▶ **Source IP - Select:**  
The name of the source IP expression.
    - ▶  You can also type an IP address.
  - ▶ **Destination Interface:**  
The destination interface (e.g. \_lan1, \_wan1, \_dmz1,...)
  - ▶ **Destination IP- Select:**  
The name of the destination IP expression.
    - ▶  You can also type an IP address.
  - ▶ **Service:**  
The service or protocol. (e.g. smtp, http, telnet,...)
  - ▶ **Flags:**
    - ▶ **Enable:**  
To enable the rule or not.
    - ▶ **Log:**  
To log the actions concerning this rule. You can see the result in **Firewall > Log**.
  - ▶ **Action:**
    - ▶ **Accept:**  
The connection is accepted.
    - ▶ **Deny:**  
Send to the sender that the packet could not be delivered.
    - ▶ **Drop:**  
The packet is silently discarded.
    - ▶ **Reset:**  
Reset of the connection.
    - ▶ **Count:**  
Counts the number of connections that match the rule description. Contrary to other actions this action does not stop further parsing of the firewall rules database. The results are shown in the **Hits** column.
- 6** Click **Apply**.

- 7 Click **Set Active** to activate the new settings.



## 5.6.2 Log

### Introduction

The Log page allows you to view log messages when:

- ▶ a firewall rule is hit.
- ▶ the firewall is enabled or disabled.
- ▶ the firewall level is changed.
- ▶ a firewall rule is created.
- ▶ a firewall rule is modified.
- ▶ a firewall rule is deleted.

#### Logged Messages

System Up Time:

View Mode:

Stop AutoRefresh

#### List of log messages

System UpTime	Message Contents
00:01:50	FIREWALL level changed to Medium.
00:00:06	FIREWALL level changed to Disabled.
00:00:05	FIREWALL event (1 of 1): enabled rules

## 5.7 VPN

---

**Availability** The VPN feature is only available if you activated the VPN software module. For more information, see “5.2.10 Add-on” on page 120.

---

**Overview** The VPN menu consists of following items

Click ...	To ...
LAN to LAN	connect your LAN with a remote LAN through an IPSec VPN tunnel.
VPN Client	set up a connection between the SpeedTouch™ and a remote VPN server.
VPN Server	set up the SpeedTouch™ as a VPN server.
Certificates	manage your authentication certificates.
Advanced	configure VPN tunnels with a component oriented environment.
Debug	see status, statistics and logging.

## 5.7.1 LAN to LAN

**Tabs** The LAN to LAN page consists of two tabs. Select:

- ▶ **Remote Gateway Address Known** as the starting page when the SpeedTouch™ must be able to initiate a VPN connection.
- ▶ **Remote Gateway Address Unknown** as the starting page when the SpeedTouch™ only needs to have responder capability. By not specifying the Remote Gateway Address, you allow additional sites to join the VPN without requiring any modification to the configuration of your SpeedTouch™.

The screenshot shows the configuration interface for LAN to LAN. It features two tabs: "Remote Gateway Address Known" (selected) and "Remote Gateway Address Unknown". Below the tabs is a table with columns for "Gateway Address", "Local Network", "Remote Network", and "State". A message "Empty table ..." is displayed below the table. Below the table, there is a section for "Remote Gateway" with input fields for "Address or FQDN\*" and "Backup Address or FQDN". The "IKE Authentication" section has two buttons: "Use Preshared Key Authentication" and "Use Certificate Authentication". The "Miscellaneous" section includes dropdown menus for "Primary Untrusted Physical Interface\*" (set to "lan1"), "IKE Exchange Mode\*" (set to "main"), and a text input for "Inactivity Timeout (seconds)" (set to "3600"). The "IKE Security Descriptors" section has a dropdown for "Descriptor\*" (set to "unset") and a "Specify Additional Descriptors" button. A note at the bottom states "Items marked with \* are mandatory." and an "Add" button is located at the bottom right.

### Configuration procedure

Perform the following steps to configure your LAN to LAN application:

- 1** On the **LAN to LAN** web page, select either **Remote Gateway Address Known** or **Remote Gateway Address Unknown**.
- 2** Configure the Remote Gateway parameters.
- 3** Define the Connection parameters.
- 4** Save the configuration.

## 5.7.2 VPN Client

### The VPN Client page

---

The VPN client in the SpeedTouch™ can replace a software VPN client installed on a computer. You can use it for example to connect from your home to your employer's corporate network for tele-working. The **VPN Client** page allows you to configure a VPN client that functions in Initiator mode. This means that the VPN client takes the initiative to set up a secure connection to a remote VPN server.

---

### Configuration procedure

Perform the following steps to configure your VPN client:

- 1** Select **VPN > VPN Client**.
- 2** Fill out the various parameter fields in the **VPN Client** web page.
- 3** Select the IKE Authentication method. Either **Preshared Key** or **Certificate Authentication** can be selected.
- 4** Select the Start Mechanism. Either **manual dial-in** or **Automatic Start (Always On)** can be selected.
- 5** Click **Add** to confirm the data and **Save All** to save the configuration.

## 5.7.3 VPN Server

### The SpeedTouch™ as VPN Server

In a VPN client-server scenario, the VPN server is always the responder in the IKE negotiations. Various VPN clients can dial in to a VPN server, since it supports multiple simultaneous VPN connections. A VPN server does not know a priori which remote Security Gateway will attempt to set up a VPN connection. In time, new users may join the VPN. It is an advantage that the SpeedTouch™ VPN server requires no modifications to its configuration when new clients are added to the VPN. The SpeedTouch™ can establish a secure connection with any Remote Gateway that meets the VPN settings, regardless its location in the public network.

The use of the Extended Authentication protocol can optionally be configured. In this case, a list of authorized users is composed and stored in the SpeedTouch™.

### Configuration procedure

Perform the following steps to configure your VPN server:

- 1** Select **VPN > VPN Server**.
- 2** Fill out the various parameter fields in the **VPN Server** web page.
- 3** Select the IKE Authentication method. Either **Preshared Key** or **Certificate Authentication** can be selected.
- 4** Click **Apply** to confirm the data and **Save All** to make the configuration permanent.

Optional: If you use the Extended Authentication protocol, you have to compose an authorized users list.

## 5.7.4 Certificates

---

Certificates pages	The Certificates pages allow you to manage your certificates.
Secure Storage page	This page shows the list of certificates stored in the SpeedTouch™.
Request Import page	This page allows importing new certificates from a Certificate Authority into the SpeedTouch™.
CRL page	This page allows managing the use of Certificates Revocation Lists.
CEP page	This page allows configuring the Certificates Enrollment Protocol settings.

---

## 5.7.5 Advanced

### When to use

The **Advanced VPN** menu gives access to two main pages where the complete IPsec configuration can be done. These pages are component-oriented, as opposed to the application-oriented pages described in “5.7.1 LAN to LAN” on page 177, “5.7.2 VPN Client” on page 178 and “5.7.3 VPN Server” on page 179. Component-oriented means that a number of components are constructed and subsequently combined.



It is highly recommended to use the application-oriented web pages for VPN configurations. Only in exceptional cases, these pages will not be sufficiently flexible to fulfil your requirements. Only in these cases, the **Advanced VPN** menu should be used.

### How to use

Configuring an operational IPsec connection basically consists of the definition of a **Peer Profile** and a **Connection Profile**. The **Peer** represents the remote Security Gateway and all the parameters required to set up an IKE Security Association to this Security Gateway. A **Connection** represents the IPsec connection and all its associated parameters.

All parameters of an IPsec configuration can be adjusted, so the functionality of these web pages corresponds to the Command Line Interface (CLI). Choices have to be made in accordance to the data known to the user, and the VPN layout.



The **Advanced VPN** menu should be used by skilled persons only, as these pages allow you to manually adjust configuration components that are in general automatically generated by the SpeedTouch™. Therefore, take care when altering settings in the **Advanced VPN** menu.

## 5.7.6 Debug


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Status page	This page shows the status of the <b>IKE Security Association (Phase 1)</b> and the <b>IPSec Security Association(s) (Phase 2)</b> . For an operational VPN connection, both an <b>IKE Security Association</b> and an <b>IPSec Security Association</b> should be active.
Statistics page	This page shows the amount of traffic carried over the <b>IKE Security Association (Phase 1)</b> and the <b>IPSec Security Association(s) (Phase 2)</b> .
Logging page	<p>On the Logging page you can monitor the received and transmitted messages of the IKE and IPSec negotiations.</p> <p>Proceed as follows:</p> <ol style="list-style-type: none"><li>1 Browse to <b>Expert mode &gt; VPN &gt; Debug &gt; Logging</b>.</li><li>2 Select the desired level of <b>Trace Detail</b>. Select <b>high</b> to see the most detailed level of logging.</li><li>3 Start the VPN connection.</li><li>4 Browse again to <b>Expert mode &gt; VPN &gt; Debug &gt; Logging</b>.</li></ol>
Tear Down All Tunnels	On this page you can halt all established VPN tunnels.

---



## 5.8 SIP PBX

Availability	The SIP PBX feature is only available if you activated the SIP PBX software module. For more information, see “5.2.10 Add-on” on page 120.
SpeedTouch™ SIP PBX	The SpeedTouch™ has a key role in the enhancement of Voice over IP services for corporations, universities or enterprises. Using the SpeedTouch™ integrated multi-media SIP PBX, the user can secure the SIP communications and manage, without involvement of the operator, certain local services such as registration blocking, sessions screening, sessions logging. The added value of a PBX is now available in a SIP-enabled network!
Enabling the SIP PBX	<p>To enable the SIP PBX:</p> <ol style="list-style-type: none"> <li><b>1</b> On the <b>SpeedTouch</b> menu, click <b>SpeedTouch Services</b>.</li> <li><b>2</b> Select the <b>SIP PBX, registrar...</b> entry.</li> <li><b>3</b> Under Service properties, click <b>Service enabled</b>.</li> <li><b>4</b> Optionally, you can change the SIP port in the Internal <b>TCP/UDP port:</b> box.</li> </ol>
Overview	<p>The <b>SIP PBX</b> menu consists of:</p> <ul style="list-style-type: none"> <li>▶ General</li> <li>▶ Location Service</li> <li>▶ Call Logging</li> <li>▶ Call Screening</li> </ul>
General	<p>The <b>General</b> page allows you to:</p> <ul style="list-style-type: none"> <li>▶ Set or change the default proxy and registrar: By default, these fields are left empty. This implies that if you configure a SIP User to use the default settings, this User Agent is only allowed to register to the SIP PBX. <ul style="list-style-type: none"> <li> It is possible to add a specific registrar/proxy for a user, overriding the default registrar/proxy.</li> </ul> </li> <li>▶ The forward time out is the time in seconds, in which the SIP PBX expects a reply from an outbound proxy/registrar. When the timer expires, the SIP PBX stops the attempt to communicate externally. This implies that the User Agents will only be working locally.</li> <li>▶ When the <b>Allow all registration</b> check box is selected, then all User Agents are allowed to register to the SIP PBX. If not, only the User Agents that are configured in Location Service &gt; My Users, will be allowed to register.</li> </ul>

- ▶ Enable/disable call screening.

**Configuration**

---

**Port:**  
Listening on port:

**Default proxy and registrar:**  
Default outbound proxy:   
Default outbound registrar:

**Proxy behaviour:**  
Forward timeout [1..7]:

**Location service properties:**  
Allow all registrations:

**Call screening status:**  
Active:

SIP PBX status: disabled.

### Location Service

The **Location Service** page allows you to:

- ▶ View the registered users.
- ▶ Add new SIP users.

### Call Logging

All inbound and outbound SIP sessions that cross the multi-media SIP PBX can be monitored from the SpeedTouch™web interface.



Both successful and failed calls will be shown.

This is a useful tool to supervise the SIP communications involving your LAN User Agents.

The **Syslog Settings** tab allows you to log SIP call information to the syslog.

### Call Screening

To increase SIP communications security, it may make sense to block sessions originating from either side of the network that are associated with particular users or groups, on account of fraud, abuse, and so forth.

## 6 Software Keys

**Introduction** A Software Key is a tool to disclose or activate services or software modules.

The following Software modules can be activated:

- ▶ VPN256-32, VPN16-4, VPN16-1:  
Integrated VPN IPSec capability (SpeedTouch™620 only)
- ▶ VPN16-4:  
Integrated VPN IPSec extension (SpeedTouch™608/608 WL only)
- ▶ ISDN:  
Integrated ISDN Modem full capacity (SpeedTouch™608 WL/620 only)
- ▶ SIP256:  
SIP Multi-Media PBX capability (SpeedTouch™620 only)

**How to activate a Software module**

Proceed as follows to activate a software module:

- 1** Browse to the SpeedTouch™ web pages at <http://192.168.1.254>.  
The SpeedTouch™ home page appears.
- 2** Select **Expert Mode > SpeedTouch > Add-On**.  
The **Add-On** page appears.

### Software Module Status Display

Name	Description	File	Status
<a href="#">VPN256-32</a>	IPSEC based VPN capability	VPN256-32.swk	Key Enabled
<a href="#">ISDN</a>	ISDN Backup capability	ISDN.swk	Key Enabled
<a href="#">SIP256</a>	Session Initiation Protocol capability	SIP256.swk	Key Enabled

### Software Activation Code Input Display

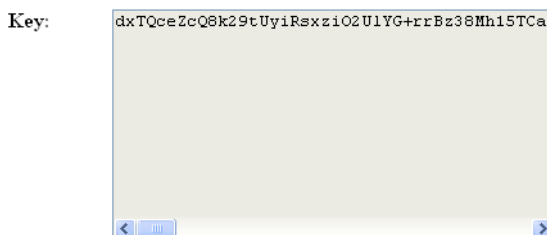
Paste the Software Activation Code you received into this box and click Add.

- 3 Select the desired software module to open the registration web site on the Internet.



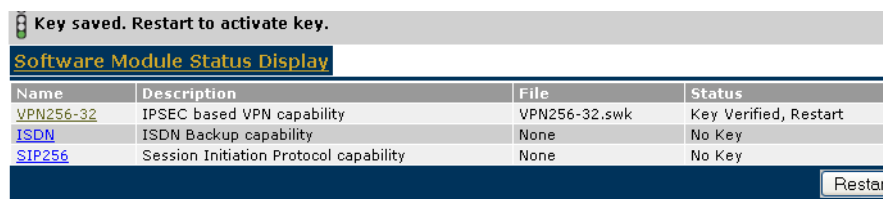
Complete the form to request a new software Key.

- 4 Select the **Request Software Key** button to proceed.



As a result you will get a text box with the key in it.

- 5 Copy the key and past it into the **Software Activation Code Input Display** and click the **Add** button.



- 6 Click the **Restart** button, to restart the SpeedTouch™ and activate the software module. A progress bar will show, indicating the time needed.

## 7 Troubleshooting

---

**Introduction** This chapter suggest solutions for problems you may encounter while installing or configuring y our SpeedTouch™.

If the suggestions do not resolve the problem, look at the support pages on <http://www.speedtouch.com/support> or contact your service provider.

For Internet connection troubleshooting, refer to the provided Installation and Setup Guide.

---

**Topics** In this chapter:


- ▶ General SpeedTouch™ Troubleshooting
- ▶ UPnP™ on Windows XP Systems
- ▶ Reset to Factory Defaults

## 7.1 General SpeedTouch™ Troubleshooting

SpeedTouch™ does not work

---

If none of the LEDs light up, make sure that:

- ▶ The SpeedTouch™ is plugged into a power socket outlet.
- ▶ You are using the correct power supply for your SpeedTouch™ device.
  -  The power requirements for your SpeedTouch™ are clearly indicated on the identification label on the bottom of the SpeedTouch™.
- ▶ The SpeedTouch™ is turned on via the rocker switch at the back panel.

SpeedTouch™ unreachable

---

If your SpeedTouch™ is cannot be reached due to misconfiguration, you might consider a hardware reset to factory defaults as described in “7.3 Reset to Factory Defaults” on page 194.



However, note that resetting the SpeedTouch™ to its factory settings will revoke all the changes you made to the configuration.

Poor SpeedTouch™ performance

---

Make sure that the SpeedTouch™ is installed and configured as instructed in the Installation and Setup Guide or as instructed by the Service Provider.

## 7.1.1 Wired Ethernet Troubleshooting

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LAN LED does not light up

Make sure that:

- ▶ The LAN cable is securely connected to the 10/100Base-T port.
- ▶ You are using the correct cable type for your Ethernet equipment, that is UTP CAT5 with RJ-45 connectors.

## 7.1.2 Wireless Ethernet Troubleshooting

Not able to connect  
wireless clients

---

Check the following:

- ▶ If registration is enabled, you must press the 'Association' button to register the wireless client or search for wireless devices via the embedded Web pages.
- ▶ Make sure the SpeedTouch™ Association Control List is not locked. You can check this on the Web pages. On the Wireless Access Point settings, make sure **New stations are not allowed** is NOT selected.

---

No wireless connectivity

Make sure that:

- ▶ Both the wireless client adapter and the SpeedTouch™ are allowed to connect through wireless channels as defined for local regulatory domain.
- ▶ The WLAN client is configured for the correct wireless settings (SSID, security settings).
- ▶ Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the SpeedTouch™ or to direct the SpeedTouch™'s antenna for optimal performance.
- ▶ Make sure that the wireless client adapter is enabled (message like "radio on").

---

Poor wireless  
connectivity or reach

Check the following:

- ▶ Choose automatic channel selection or carefully select a radio channel that does not interfere with other radio channels.
- ▶ Make sure both the WLAN client adapter and the SpeedTouch™ are allowed to connect through wireless channels as defined for local regulatory domain.
- ▶ Check the location of the SpeedTouch™ in the building.
- ▶ Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the SpeedTouch™ or to direct the SpeedTouch™'s antenna for optimal performance.



### 7.1.3 Upgrade Troubleshooting

Error messages

While upgrading your SpeedTouch™ via the Web pages, one of the following messages may appear:

Message	Due to
Failed to retrieve new software version from the support site. Try again later.	<ul style="list-style-type: none"> <li>▶ The file does not exist, meaning there is no newer software release.</li> <li>▶ Loss of connectivity. Try again later.</li> </ul>
Could not install the new software version. If problem persists, contact your help desk.	An internal error (switchover from active to passive build failed, out of disk space,...) occurred. Try again later. If the problem persists, contact your help desk.

## 7.2 UPnP™ on Windows XP Systems

SpeedTouch™ not detected by UPnP™ or IGD Control Client

Check the following:

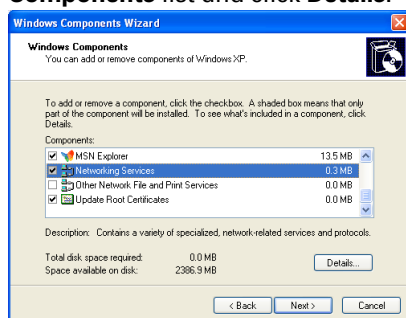
- ▶ Make sure the UPnP™ and Internet Gateway Device Control Client Networking components are added to your Windows XP system.
- ▶ Your computer doesn't support UPnP™ if you run an operating system other than Windows XP and Windows Millennium.
- ▶ Make sure that UPnP™ is not disabled in the SpeedTouch™ Web page; see "4.5.2 Game & Application Sharing" on page 59.

Adding UPnP™

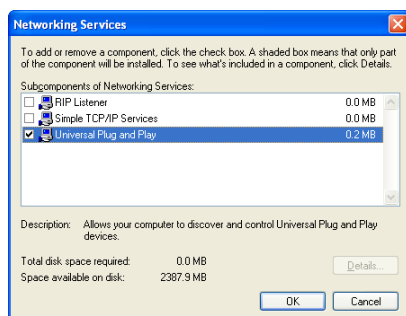
If you are running Microsoft Windows XP, it is recommended to add the UPnP™ component to your system.

Proceed as follows:

- 1 In the **Start** menu, click (**Settings >**) **Control Panel**.  
The **Control Panel** window appears.
- 2 Click **Add or Remove Programs**.  
The **Add or Remove Programs** window appears.
- 3 Click **Add/Remove Windows Components**.
- 4 In the **Windows Components Wizard**, select **Networking Services** in the **Components** list and click **Details**.



- 5 In the **Networking Services** window, select **Universal Plug and Play** or **UPnP User Interface** and click **OK**.



- 6 Click **Next** to start the installation and follow the instructions in the **Windows Components Wizard**.
- 7 At the end of the procedure the wizard informs you that the installation was successful. Click **Finish** to quit.

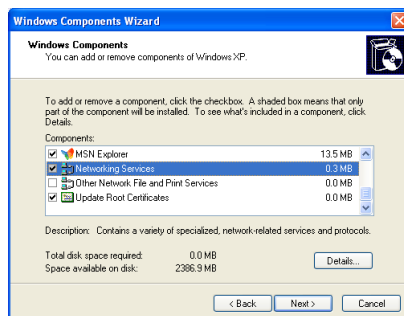
## Adding IGD Discovery and Control

Your Windows XP system is able to discover and control Internet Gateway Devices (IGD), like the SpeedTouch™ on your local network. Therefore it is recommended to add the IGD Discovery and Control client to your system.

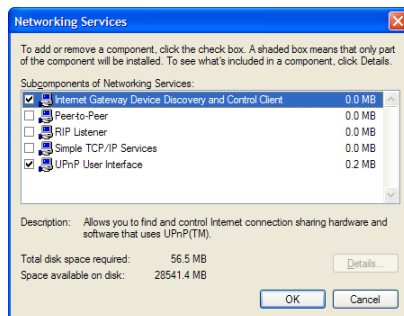
Proceed as follows:

- 1 On the Windows taskbar, click **Start**.
- 2 Select **(Settings >) Control Panel > Add or Remove Programs**.
- 3 In the **Add or Remove Programs** window, click **Add/Remove Windows Components**.

The **Windows Components Wizard** appears:



- 4 Select **Networking Services** in the **Components** list and click **Details**.
- 5 In the **Networking Services** window, Select **Internet Gateway Device Discovery and Control Client** and click **OK**.



- 6 Click **Next** to start the installation and follow the instructions in the **Windows Components Wizard**.
- 7 At the end of the procedure the wizard informs you that the installation was successful. Click **Finish** to quit.

## 7.3 Reset to Factory Defaults

### Resetting your SpeedTouch™

You might consider a reset to factory defaults as described below.



Be aware that a reset to factory defaults will revoke all configurational changes you made to the SpeedTouch™.

You can choose between:

- ▶ Software reset
- ▶ Hardware reset

A reset to factory default settings deletes the configuration profile settings. Therefore, after the reset, a reconfiguration of your SpeedTouch™ will be needed.

Also your WLAN clients will have to be re-associated, as described in “2.2.2 Connecting Wireless Clients for the First Time” on page 20.

### Software reset

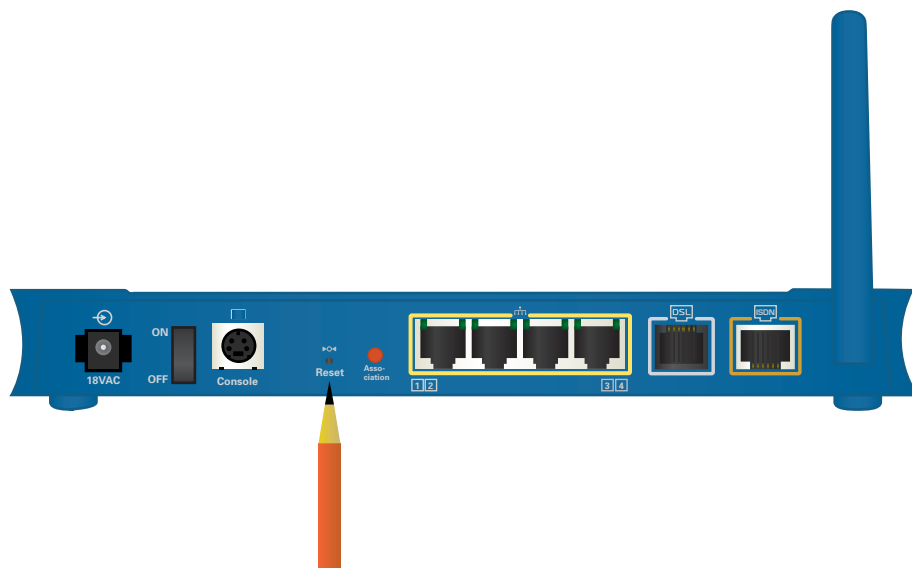
Proceed as follows:

- 1** Go to the SpeedTouch™ Web pages.
- 2** In the menu, select **SpeedTouch > Configuration**.
- 3** In the **Pick a task** list, click **Reset my SpeedTouch to default settings**. The SpeedTouch™ restarts.
- 4** The SpeedTouch™ returns to the SpeedTouch™ home page (unless the IP address of your computer is not in the same subnet as the default IP address of the SpeedTouch™, being 192.168.1.254).

### Hardware reset

Proceed as follows:

- 1** Make sure the SpeedTouch™ is turned on.
- 2** Use a pen or an unfolded paperclip to push the recessed reset button on the back panel. The reset button is marked with a red circle. Push it until the power LED lights red - this will take about 7 seconds.



- 3** Release the reset button.

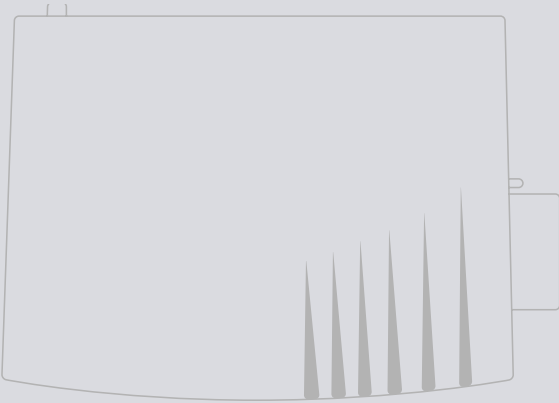
**4** The SpeedTouch™ restarts.



Your system administrator may have disabled the physical reset button of the SpeedTouch™. In this case, a hardware reset to defaults is not possible.







## Need more help?

Additional help is available online at [www.speedtouch.com](http://www.speedtouch.com)